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AMC16Z Series AC precision power distribution monitoring device

Installation and operation instruction V1.4

ACREL CO.,LTD

Declaration

The company reserves the right to modify the specifications described in this manual without prior notice.Before ordering, please consult your local agent for new specifications.

Contents

1 Overview

With the rapid development of data center, the energy consumption problem of data center is becoming more and more prominent. The energy management and power supply and distribution design of data center have become a hot issue. Efficient and reliable power distribution system scheme of data center is an effective way to improve the power consumption efficiency of data center and reduce the energy consumption of equipment. In order to realize energy saving in data center, it is necessary to monitor each electrical load first. However, there are many load circuits in data center. Traditional measuring instruments cannot meet the requirements of cost, volume, installation, construction and other aspects. In this case, the multi-circuit monitoring device which is suitable for centralized monitoring in data center is necessary to be used.

AMC16Z series AC precision power distribution monitoring device is specially designed for data center server power management.The device designed exquisite, can provide A + B 2 incoming and 96 outgoing's electrical parameters, the input and output switch and the state of lightning protection device with real-time monitoring. All alarm threshold of measurement channels can be set in separate. Over-outgoing triggers system acoustooptic warning immediately. Highly integrated monitoring loop is realized in the volume of traditional instruments.

2 Product Model

Ty Model	Function description
AMC16Z-ZA	Monitor the full power parameters of A+B double-way three-phase AC incoming circuit, 6-way switch state monitoring, 2-way alarm output, 2-way leakage monitoring, 1-way temperature and humidity detection, 1-way RS485 communication, and phase-sequence detection.
AMC16Z-FA	Monitor the full power parameters of 24 branches of A+B double-way AC outgoing line, 1-way RS485 communication and phase adjustment.
AMC16Z-FAK24	Monitor the full power parameters and switch state of 24 branches of A+B double-way AC outgoing line, 1-way RS485 communication and phase adjustment.
AMC16Z-FAK48	Monitor the full power parameters and switch state of 48 branches of A+B double-way AC outgoing line, 1-way RS485 communication and phase adjustment.
AMC16Z-KA	Wet contact, monitoring A+B total 48 branch switch state, 1-way RS485 communication.
AMC16Z-KD	Dry contact, monitoring A+B total 48 branch switch state, 1-way RS485 communication.
AMC16Z-AC220V	AC220V extended power supply, and use when the monitoring circuit is beyond 96 branches of A+B

3 Technical parameter

AC incoming line

Technical parameter		AMC16Z-ZA
Measured parameters		Voltage, current, frequency, active power, reactive power, power factor, active power, reactive power
		Zero ground voltage, neutral line current, total harmonic content (THD), 2-63 harmonics, current and voltage unbalance degree, current K coefficient (KF), voltage crest coefficient (CF),telephone waveform factor (THFF), peak voltage, voltage and current sequence quantity, environmental temperature and humidity.
Busbar voltage	Rated	220VAC
	Measurement	±20%
	Overload	Instant voltage 2times/second

Current incoming circuit	Rated	Twice 5A
	Range	0～6A
	Overload	Duration 1.2 times, instantaneous 10 times/second
Temp &humidity	Temp range	-40℃～+99℃
	humidity range	20%～90%
Input frequency		45～60Hz
Measurement precision	Inlet wire	Voltage/current level 0.2, active power/electric energy level 0.5, reactive power/electric energy level 1
	Temp	±1℃
	Humidity	±5%
Auxiliary power supply		Take electric signal(≤15W)
Environment	Temp	Working:-15℃～55℃ Storage:-25℃～70℃
	Humidity	Relative humidity ≤93%
	Altitude	≤2500m
Switch output		2-way 3A 250VAC/3A 30VDC
Switch input		6-way dry contact
Communication		RS485/Modbus-RTU
Installation method		DIN35mm Guide rail or bottom plate mounting
IP grade		IP20
Class of pollution		2
Safety	Insulation	All terminals and the insulation resistance between the conductive pieces not less than 100MΩ
	Withstand voltage	A-way voltage and current signal, B-way voltage and current signal, switch output and other ports should meet AC2kV 1min in pairs, the switch input and other ports should meet ac0.5kv 1mim, leakage current should be less than 2mA, no breakdown or flashover
Electromagnetic compatibility	Anti static interference	Level 4
	Electrical fast transient pulse group	Level 3
	Anti-surge interference	Level 4
	Resistance to radiation of Radio frequency electromagnetic field	Level 3

AC outlet

Technical parameter	AMC16Z-FA
Measured parameters	Voltage, current, frequency, active power, reactive power, power factor, active power, reactive power.
	2-31 harmonic

Bus Voltage	Rated	220VAC
	Measurement	±20%
	Overload	Instantaneous voltage 2 times /second
Current outgoing line circuit	Rated	50mA
	Range	0.125～60mA
	Overload	Duration 1.2 times, instantaneous 10 times/second
Input frequency		45～60Hz
Measurement precision	Outgoing line	Voltage/current/active power/active energy level 0.5, reactive power/reactive energy level 1
Auxiliary power supply		power supply by AMC16Z-ZA
Environment	Temp	Working:-15℃～55℃ Storage:-25℃～70℃
	Humidity	Relative humidity ≤93%
	Altitude	≤2500m
Communication		RS485/Modbus-RTU
Installation method		DIN35mm Guide rail or bottom plate mounting
IP grade		IP20
Pollution grade		2
Safety	Insulation	All terminals and the insulation resistance between the conductive pieces not below 100MΩ
	Withstand voltage	A-channel voltage and current signal // B-channel voltage and current signal // other ports meet AC2kV 1min between pairs, leakage current should be less than 2mA, no breakdown or flashover phenomenon.
Electromagnetic compatibility	Anti static interference	Level 4
	Resistance to radiation of Radio frequency electromagnetic field	Level 3

Note: the rated input current of the secondary side of the AC outgoing module is 50mA, and the default value of the primary side is 50A.If the CT is different, the customer can set the ratio through touch screen or upper computer according to the actual usage.

Technical parameters		AMC16Z-FAK24	AMC16Z-FAK48
Measurement parameters		Voltage, current, frequency, active power, reactive power, power factor, active power, reactive power, switching state	
		2-31 times harmonics	
Bus Voltage	Rated	220VAC	
	Measurement	±20%	
	Overload	Instantaneous voltage 2 times/second	
Current	Rated	50mA	

outgoing line loop	Range	0.125～60mA
	Overload	Duration 1.2 times, instantaneous 10 times/second
Input frequency		45～60Hz
Measurement accuracy	Outgoing line	Voltage/current/active power/active energy level 0.5, reactive power/reactive energy level 1
Auxiliary power supply		Power supply by AMC16Z-ZA
Environment	Temperature	Working:-15℃～55℃ Storage:-25℃～70℃
	Humidity	Relative humidity
	Altitude	≤2500m
Communication		RS485/Modbus-RTU
Installation method		DIN35mm Guide rail or bottom plate mounting
IP grade		IP20
Class of pollution		2
Safety	Insulation	All terminals and the insulation resistance between the conductive pieces not below 100 m Ω
	Withstand voltage	A-channel voltage and current signal // B-channel voltage and current signal // other ports meet AC2kV 1min between pairs, leakage current should be less than 2mA, no breakdown or flashover phenomenon.
Electromagnetic compatibility	Anti static interference	Level 4
	Resistance to radiation of Radio frequency electromagneti	Level 3

Note: The rated of the secondary side input current of AMC16Z-FAK module is 50mA. The default value of the primary side is 50A. If the CT is different, the customer can set the ratio through touch screen or upper computer according to the actual usage.

Active switch module

Technical parameters		AMC16Z-KA
Input frequency		45-60Hz
Auxiliary power supply		Power supply by AMC16Z-ZA
Environment	Temperature	Work: -15 ℃ ～ 55 ℃ Storage: -25 ℃ ～ 70 ℃
	Humidity	Relative humidity≤93%
	Altitude	≤2500m
Switch input		48-way wet contact(AC 220V)
Communication		RS485/Modbus-RTU
Installation method		DIN35mm Guide rail or bottom plate mounting
IP grade		IP20
Class of pollution		2

Safety	Insulation	the insulation resistance between the conductive pieces not below 100 m Ω
	Withstand voltage	A-channel Switch input signal // B-channel Switch input signal // other ports meet AC2kV 1min between pairs, leakage current should be less than 2mA, no breakdown or flashover phenomenon.
Electromagnetic compatibility	Anti static interference	Level 4
	Resistance to Radiation of radio frequency	Level 3

Reactive switch module

Technical parameters		AMC16Z-KD
Input frequency		45～60HZ
Auxiliary power supply		Power supply by AMC16Z-ZA
Environment	Temperature	Work: -15 ℃ ～ 55 ℃ Storage: -25 ℃ ～ 70 ℃
	Humidity	Relative humidity≤93%
	Altitude	≤2500m
Switch input		48-way dry contact
Communication		RS485/Modbus-RTU
Installation method		DIN35mm Guide rail or bottom plate mounting
IP grade		IP20
Class of pollution		2
Safety	Insulation	All terminals and the insulation resistance between the conductive pieces not below 100 m Ω
	Withstand voltage	A-channel Switch input signal // B-channel Switch input signal // other ports meet AC2kV 1min between pairs, leakage current should be less than 2mA, no breakdown or flashover
Electromagnetic compatibility	Anti static interference	Level 4
	Resistance to radiation of Radio frequency electromagnetic	Level 3

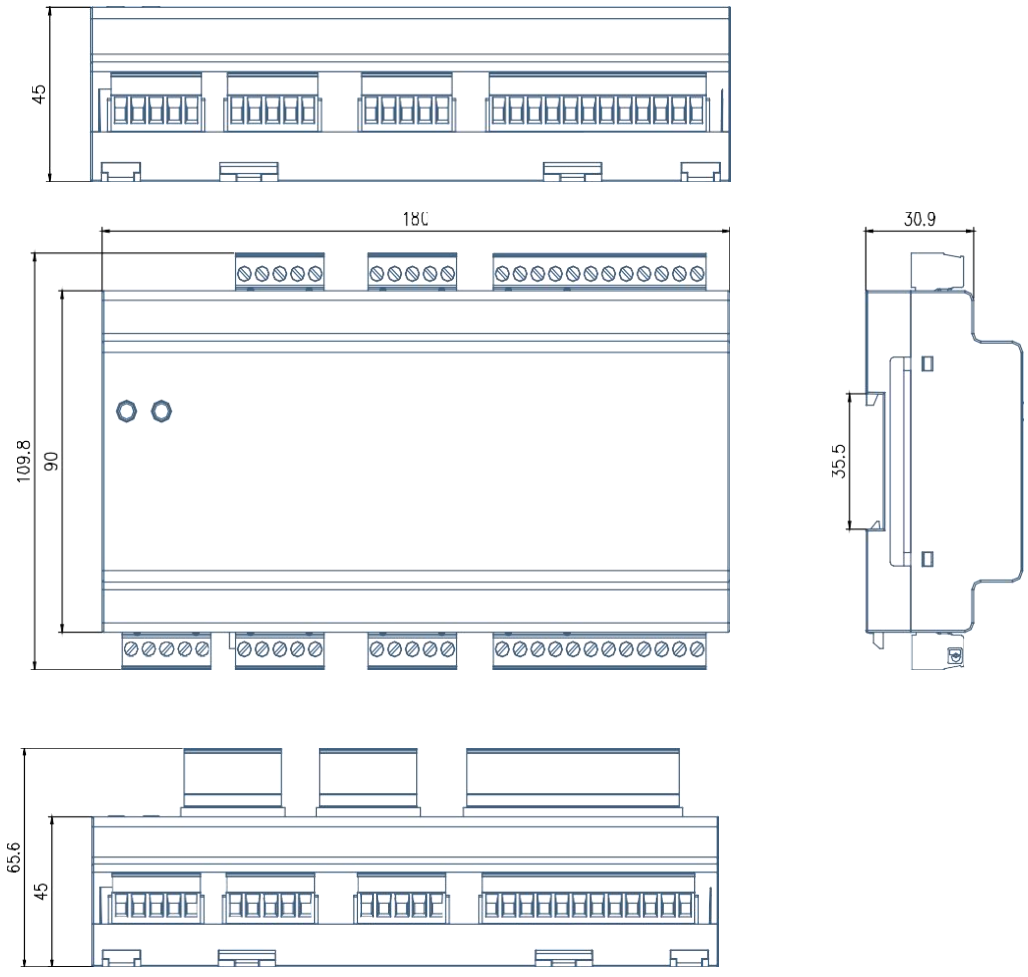
Extended power module

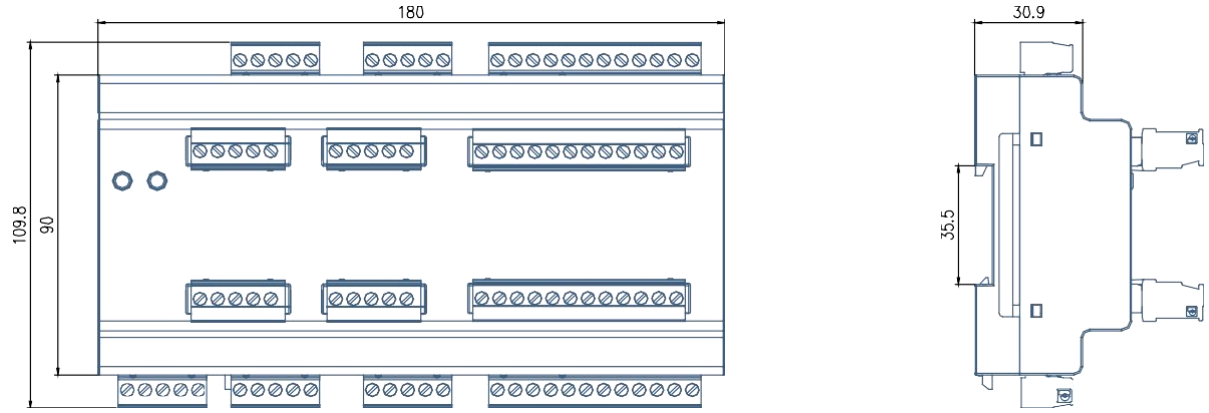
Technical parameters		AMC16Z-AC220V
Input	voltage range	AC180～260VDC
Output	voltage	12VDC
	current	1A
	Maximum output power	12W
Environment	Temperature	Work: -15 ℃ ～ 55 ℃ Storage: -25 ℃ ～ 70 ℃
	Humidity	Relative humidity≤93%
	Altitude	≤2500m
Installation method		DIN35mm Guide rail or bottom plate mounting
IP grade		IP20

Class of pollution		2
Safety	Insulation	All terminals and the insulation resistance between the conductive pieces not below 100 m Ω
	Withstand voltage	A-channel Switch input signal // B-channel Switch input signal // other ports meet AC2kV 1min between pairs, leakage current should be less than 2mA, no breakdown or flashover
Electromagnetic compatibility	Anti static interference	Level 4
	Electrical fast transient pulse group	Level 3
	Anti-surge interference	Level 4
	Resistance to radiation of radio frequency electromagnetic	Level 3

4 external structure

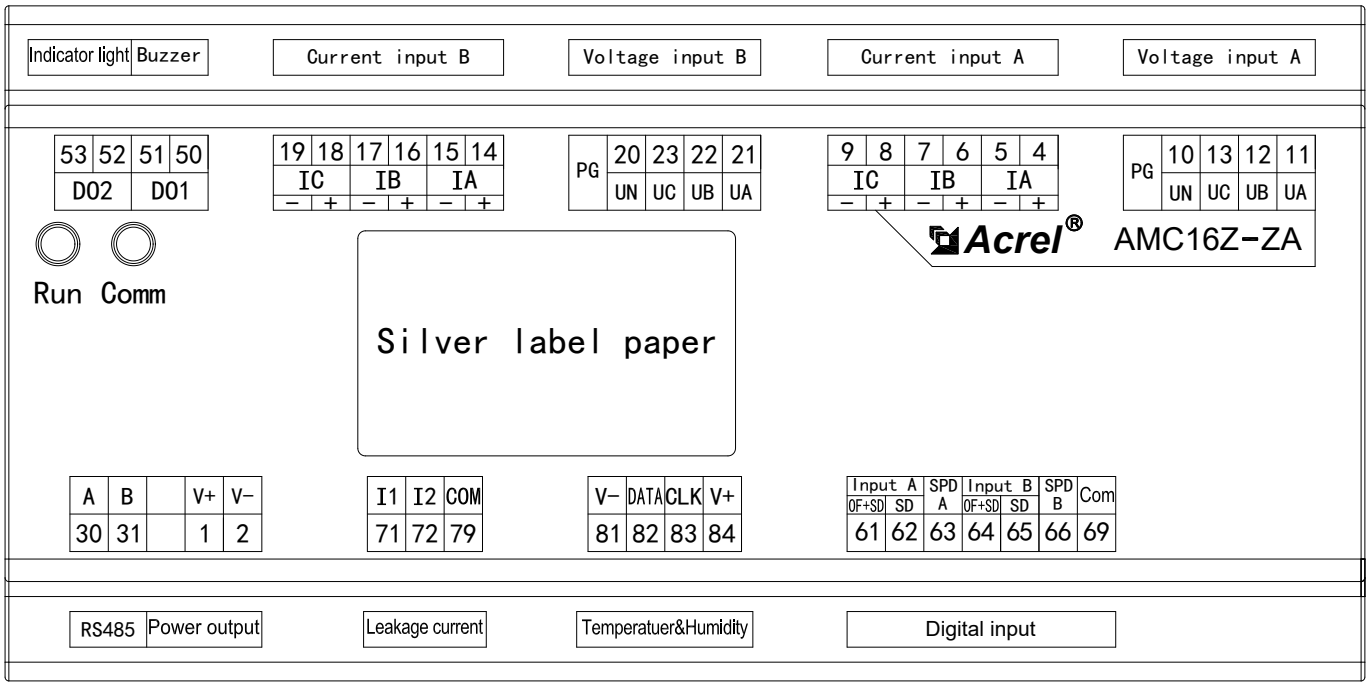
AMC16Z series AC precision power distribution monitoring device Unit：mm





5 Terminals

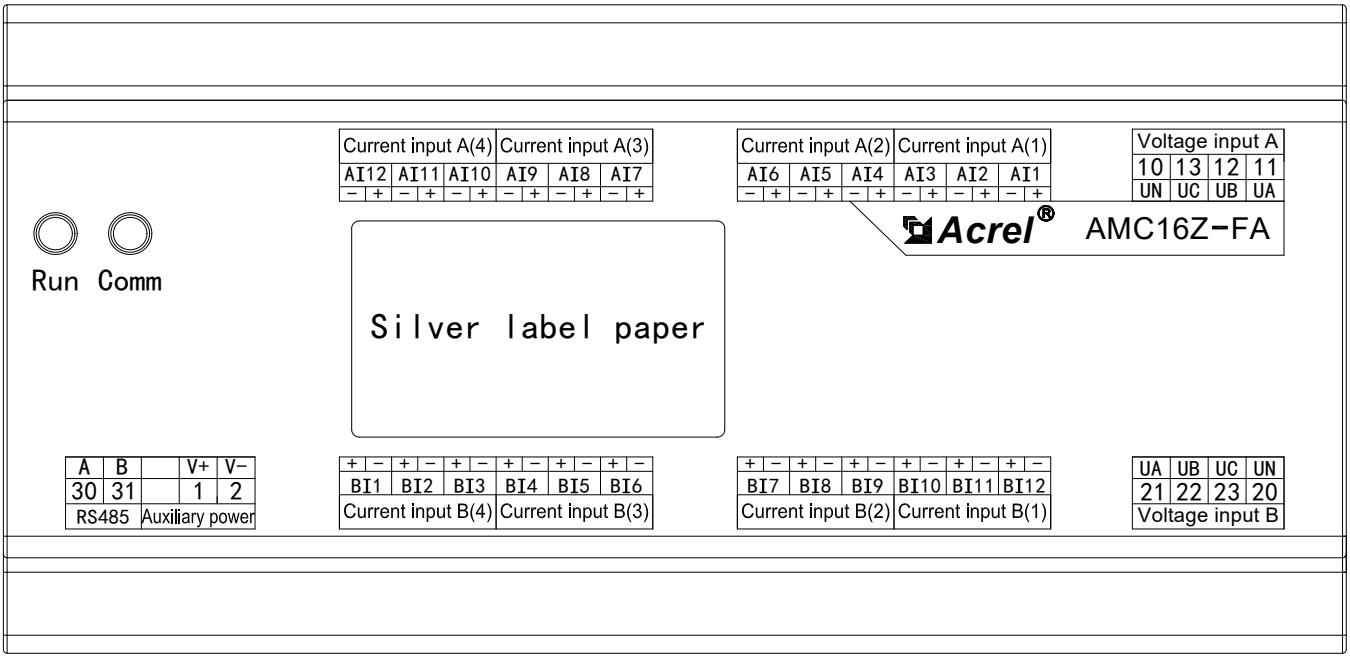
5.1 AMC16Z-ZA



number	definition	Explanation	Remarks
1	V+	Power Output	Power supply 12V to AMC16Z-FA, AMC16Z-KA,AMC16Z-KD and touch screen,the power supply is forbidden to connect other devices (such as indicator light, buzzer)
2	V-		
4	IA+	Current input phase A	A-channel incoming three-phase current input
5	IA-		
6	IB+	Current input phase B	
7	IB-		
8	IC+	Current input phase C	
9	IC-		
10	UN	AC voltage neutral	A-channel incoming three-phase voltage input
11	UA	AC voltage phase A	
12	UB	AC voltage phase B	

13	UC	AC voltage phase C	
PG		Earth	
14	IA+	Current input phase A	B-channel incoming three-phase current input
15	IA-		
16	IB+	Current input phase B	
17	IB-		
18	IC+	Current input phase C	
19	IC-		
20	UN	AC voltage neutral	B-channel incoming three-phase voltage input
21	UA	AC voltage phase A	
22	UB	AC voltage phase B	
23	UC	AC voltage phase C	
PG		Earth	
30	A	RS485 communication	Connect to touch screen or RS485 hub
31	B		
50	DO1	Switch output	Connect the buzzer
51			
52	DO2		Connect indicator
53			
61	Incoming line A	Switch input	OF+SD
62			SD
63	Lightning A		c
64	Incoming line B		OF+SD
65			SD
66	Lightning B		Judge the status of B-channel lightning protector
69	Public end		Switching common
71	I1	Leakage	Leakage 1st leakage current
72	I2		Second leakage current
79	COM		Leakage common
81	V-	temperature and humidity	Connect WH-3 temperature and humidity sensor
82	DATE		
83	CLK		
84	V+		

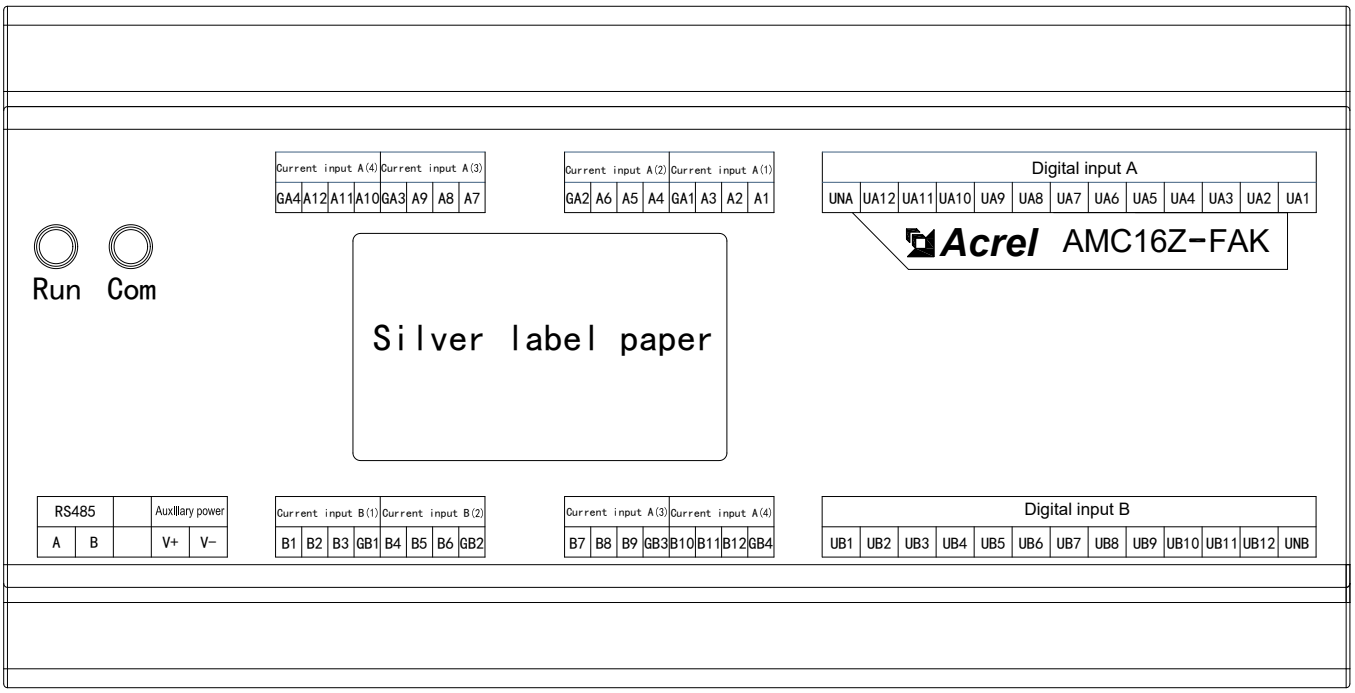
5.2 AMC16Z-FA



number	definition	Explanation	Remarks
1	V+	Auxiliary power	Powered by AMC16Z-ZA
2	V-		
10	UN	A-circuit AC voltage zero line	A - channel outgoing line three - phase voltage input
11	UA	A circuit AC voltage phase A	
12	UB	A circuit AC voltage phase B	
13	UC	A circuit AC voltage phase C	
20	UN	B-circuit AC voltage zero line	B- channel outgoing line three - phase voltage input
21	UA	B circuit AC voltage phase A	
22	UB	B circuit AC voltage phase B	
23	UC	B circuit AC voltage phase C	
30	A	RS485communication	Connect to touch screen or RS485
31	B		
AI1+		A channel current A phase(1)	The first group of A - channel outgoing line three - phase current input
AI1-			
AI2+		A channel current B phase(1)	
AI2-			
AI3+		A channel current C phase (1)	
AI3-			

AI4+	A channel current A phase(2)	The second group of A - channel outgoing line three - phase current input
AI4-		
AI5+	A channel current B phase(2)	
AI5-		
AI6+	A channel current C phase(2)	
AI6-		
AI7+	A channel current A phase(3)	The third group of A - channel outgoing line three - phase current input
AI7-		
AI8+	A channel current B phase(3)	
AI8-		
AI9+	A channel current C phase(3)	
AI9-		
AI10+	A channel current A phase(4)	The fourth group of A - channel outgoing line three - phase current input
AI10-		
AI11+	A channel current B phase(4)	
AI11-		
AI12+	A channel current C phase(4)	
AI12-		
BI1+	B channel current A phase(1)	The first group B - channel outgoing line three - phase current input
BI1-		
BI2+	B channel current B phase(1)	
BI2-		
BI3+	B channel current C phase(1)	
BI3-		
BI4+	B channel current A phase(2)	The Second group B - channel outgoing line three - phase current input
BI4-		
BI5+	B channel current B phase(2)	
BI5-		
BI6+	B channel current C phase(2)	
BI6-		
BI7+	B channel current A phase(3)	The Third group B - channel outgoing line three - phase current input
BI7-		
BI8+	B channel current B phase(3)	
BI8-		
BI9+	B channel current C phase(3)	
BI9-		
BI10+	B channel current A phase(4)	The fourth group B - channel outgoing line three - phase current input
BI10-		
BI11+	B channel current B phase(4)	
BI11-		
BI12+	B channel current C phase(4)	
BI12-		

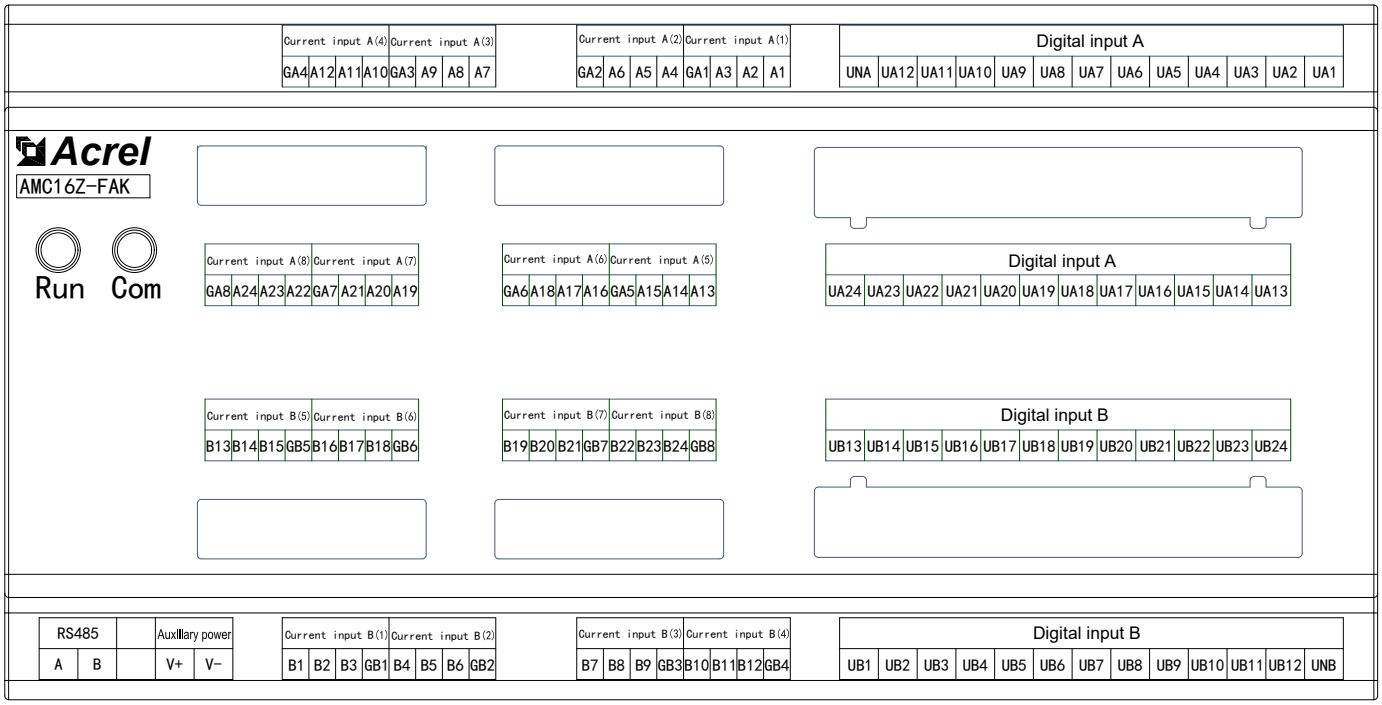
5.3 AMC16Z-FAK24



definition	Explanation	Remarks
V+	Auxiliary power	Powered by AMC16Z-ZA
V-		
A	RS485 communication	Connect to touch screen or RS485 hub
B		
A1	A-channel current A phase positive pole(1)	The first group of A - channel outgoing line three - phase current input
A2	A-channel current B phase positive pole(1)	
A3	A-channel current C phase positive pole(1)	
GA1	A-channel current negative common terminal(1)	
A4	A-channel current A phase positive pole(2)	The second group of A - channel outgoing line three - phase current input
A5	A-channel current B phase positive pole(2)	
A6	A-channel current C phase positive pole(2)	
GA2	A-channel current negative common terminal(2)	
A7	A-channel current A phase positive pole(3)	The Third group of A - channel outgoing line three - phase current input
A8	A-channel current B phase positive pole(3)	
A9	A-channel current C phase positive pole(3)	
GA3	A-channel current negative common terminal(3)	
A10	A-channel current A phase positive pole(4)	The fourth group of A - channel outgoing line three - phase current input
A11	A-channel current B phase positive pole(4)	
A12	A-channel current C phase positive pole(4)	
GA4	A-channel current negative common terminal(4)	
B1	B-channel current A phase positive pole(1)	The first group of B - channel
B2	B-channel current B phase positive pole(1)	

B3	B-channel current C phase positive pole(1)	outgoing line three - phase current input
GB1	B-channel current negative common terminal(1)	
B4	B-channel current A phase positive pole(2)	The second group of B - channel outgoing line three - phase current input
B5	B-channel current B phase positive pole(2)	
B6	B-channel current C phase positive pole(2)	
GB2	B-channel current negative common terminal(2)	
B7	B-channel current A phase positive pole(3)	The third group of B - channel outgoing line three - phase current input
B8	B-channel current B phase positive pole(3)	
B9	B-channel current C phase positive pole(3)	
GB3	B-channel current negative common terminal(3)	
B10	B-channel current A phase positive pole(4)	The fourth group of B - channel outgoing line three - phase current input
B11	B-channel current B phase positive pole(4)	
B12	B-channel current C phase positive pole(4)	
GB4	B-channel current negative common terminal(4)	
KA1	A channel AC voltage A phase(1)	Switch A input
KA2	A channel AC voltage B phase(1)	
KA3	A channel AC voltage C phase(1)	
KA4	A channel AC voltage A phase(2)	
KA5	A channel AC voltage B phase(2)	
KA6	A channel AC voltage C phase(2)	
KA7	A channel AC voltage A phase(3)	
KA8	A channel AC voltage B phase(3)	
KA9	A channel AC voltage C phase(3)	
KA10	A channel AC voltage A phase(4)	
KA11	A channel AC voltage B phase(4)	
KA12	A channel AC voltage C phase(4)	
UNA	A channel AC voltage neutral	
KB1	B channel AC voltage A phase(1)	Switch B input
KB2	B channel AC voltage B phase(1)	
KB3	B channel AC voltage C phase(1)	
KB4	B channel AC voltage A phase(2)	
KB5	B channel AC voltage B phase(2)	
KB6	B channel AC voltage C phase(2)	
KB7	B channel AC voltage A phase(3)	
KB8	B channel AC voltage B phase(3)	
KB9	B channel AC voltage C phase(3)	
KB10	B channel AC voltage A phase(4)	
KB11	B channel AC voltage B phase(4)	
KB12	B channel AC voltage C phase(4)	
UNB	B Channel AC voltage neutral	

5.4 AMC16Z-FAK48



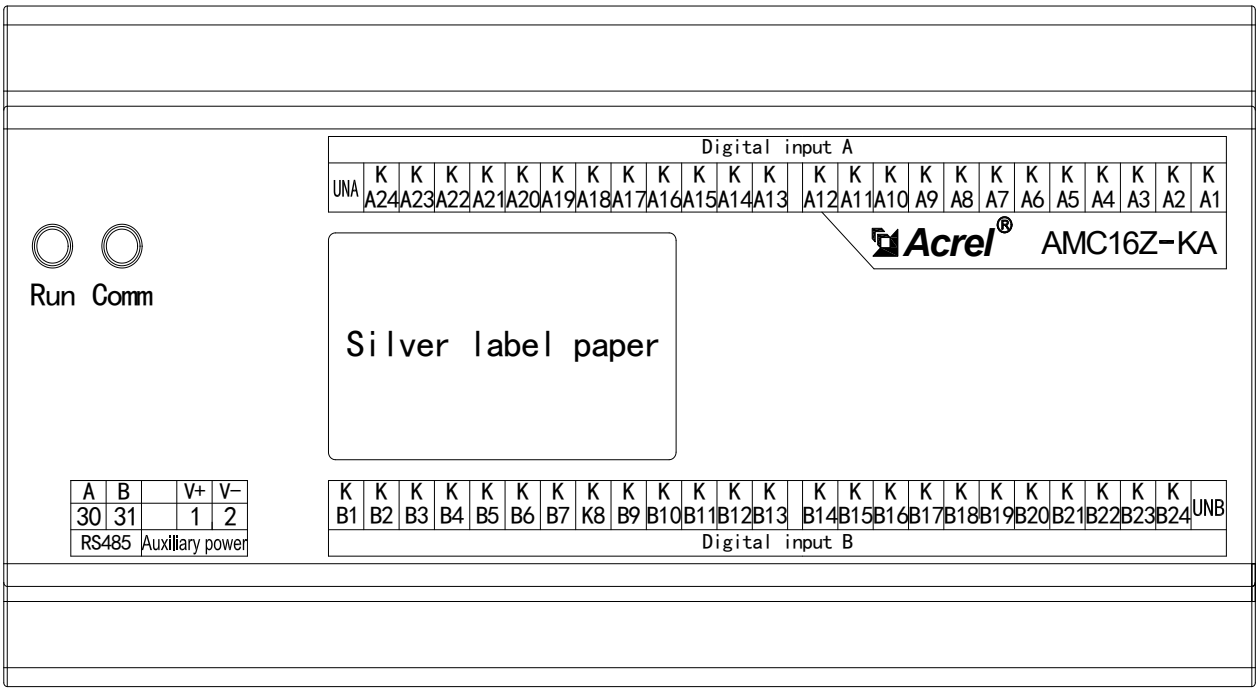
Terminal definition	Instruction	Remark
V+	Auxiliary power supply	Power supply by AMC16Z-ZA
V-		
A	RS485 communication	Connect to touch screen or RS485 hub
B		
A1	A-channel current A phase positive pole(1)	The first part of A - channel outgoing line three - phase current input
A2	A-channel current B phase positive pole(1)	
A3	A-channel current C phase positive pole(1)	
GA1	A-channel current negative common terminal(1)	
A4	A-channel current A phase positive pole(2)	The second part of A - channel outgoing line three - phase current input
A5	A-channel current B phase positive pole(2)	
A6	A-channel current C phase positive pole(2)	
GA2	A-channel current negative common terminal(2)	
A7	A-channel current A phase positive pole(3)	The third part of A - channel outgoing line three - phase current input
A8	A-channel current B phase positive pole(3)	
A9	A-channel current C phase positive pole(3)	
GA3	A-channel current negative common terminal(3)	
A10	A-channel current A phase positive pole(4)	The fourth part of A - channel outgoing line three - phase current input
A11	A-channel current B phase positive pole(4)	
A12	A-channel current C phase positive pole(4)	
GA4	A-channel current negative common terminal(4)	
A13	A-channel current A phase positive pole(5)	The fifth part of A - channel outgoing line three - phase current input
A14	A-channel current B phase positive pole(5)	
A15	A-channel current C phase positive pole(5)	
GA5	A-channel current negative common terminal(5)	
A16	A-channel current A phase positive pole(6)	The sixth part of A - channel outgoing line

A17	A-channel current B phase positive pole(6)	three - phase current input
A18	A-channel current C phase positive pole(6)	
GA6	A-channel current negative common terminal(6)	
A19	A-channel current A phase positive pole(7)	The seventh part of A - channel outgoing line three - phase current input
A20	A-channel current B phase positive pole(7)	
A21	A-channel current C phase positive pole(7)	
GA7	A-channel current negative common terminal(7)	
A22	A-channel current A phase positive pole(8)	The eighth part of A - channel outgoing line three - phase current input
A23	A-channel current B phase positive pole(8)	
A24	A-channel current C phase positive pole(8)	
GA8	A-channel current negative common terminal(8)	
B1	B-channel current A phase positive pole(1)	The first group B - channel outgoing line three - phase current input
B2	B-channel current B phase positive pole(1)	
B3	B-channel current C phase positive pole(1)	
GB1	B-channel current negative common terminal(1)	
B4	B-channel current A phase positive pole(2)	The second group B - channel outgoing line three - phase current input
B5	B-channel current B phase positive pole(2)	
B6	B-channel current C phase positive pole(2)	
GB2	B-channel current negative common terminal(2)	
B7	B-channel current A phase positive pole(3)	The third group B - channel outgoing line three - phase current input
B8	B-channel current B phase positive pole(3)	
B9	B-channel current C phase positive pole(3)	
GB3	B-channel current negative common terminal(3)	
B10	B-channel current A phase positive pole(4)	The forth group B - channel outgoing line three - phase current input
B11	B-channel current B phase positive pole(4)	
B12	B-channel current C phase positive pole(4)	
GB4	B-channel current negative common terminal(4)	
B13	B-channel current A phase positive pole(5)	The fifth group B - channel outgoing line three - phase current input
B14	B-channel current B phase positive pole(5)	
B15	B-channel current C phase positive pole(5)	
GB5	B-channel current negative common terminal(5)	
B16	B-channel current A phase positive pole(6)	The sixth group B - channel outgoing line three - phase current input
B17	B-channel current B phase positive pole(6)	
B18	B-channel current C phase positive pole(6)	
GB6	B-channel current negative common terminal(6)	
B19	B-channel current A phase positive pole(7)	The seventh group B - channel outgoing line three - phase current input
B20	B-channel current B phase positive pole(7)	
B21	B-channel current C phase positive pole(7)	
GB7	B-channel current negative common terminal(7)	
B22	B-channel current A phase positive pole(8)	The eighth group B - channel outgoing line

B23	B-channel current B phase positive pole(8)	three - phase current input
B24	B-channel current C phase positive pole(8)	
GB8	B-channel current negative common terminal(8)	
KA1	A-channel AC voltage A phase (1)	The first part of A - channel DI
KA2	A-channel AC voltage B phase (1)	
KA3	A-channel AC voltage C phase (1)	
KA4	A-channel AC voltage A phase (2)	
KA5	A-channel AC voltage B phase (2)	
KA6	A-channel AC voltage C phase (2)	
KA7	A-channel AC voltage A phase (3)	
KA8	A-channel AC voltage B phase (3)	
KA9	A-channel AC voltage C phase (3)	
KA10	A-channel AC voltage A phase (4)	
KA11	A-channel AC voltage B phase (4)	
KA12	A-channel AC voltage C phase (4)	
UNA	A-channel AC voltage null line	
KA13	A-channel AC voltage A phase (5)	The second part of A - channel DI
KA14	A-channel AC voltage B phase (5)	
KA15	A-channel AC voltage C phase (5)	
KA16	A-channel AC voltage A phase (6)	
KA17	A-channel AC voltage B phase (6)	
KA18	A-channel AC voltage C phase (6)	
KA19	A-channel AC voltage A phase (7)	
KA20	A-channel AC voltage B phase (7)	
KA21	A-channel AC voltage C phase (7)	
KA22	A-channel AC voltage A phase (8)	
KA23	A-channel AC voltage B phase (8)	
KA24	A-channel AC voltage C phase (8)	
KB1	B-channel AC voltage A phase (1)	The first group B- channel DI
KB2	B-channel AC voltage B phase (1)	
KB3	B-channel AC voltage C phase (1)	
KB4	B-channel AC voltage A phase (2)	
KB5	B-channel AC voltage B phase (2)	
KB6	B-channel AC voltage C phase (2)	
KB7	B-channel AC voltage A phase (3)	
KB8	B-channel AC voltage B phase (3)	
KB9	B-channel AC voltage C phase (3)	
KB10	B-channel AC voltage A phase (4)	
KB11	B-channel AC voltage B phase (4)	
KB12	B-channel AC voltage C phase (4)	
UNB	B-channel AC voltage null line	
KB13	B-channel AC voltage A phase (5)	The second group B- channel DI
KB14	B-channel AC voltage B phase (5)	
KB15	B-channel AC voltage C phase (5)	
KB16	B-channel AC voltage A phase (6)	

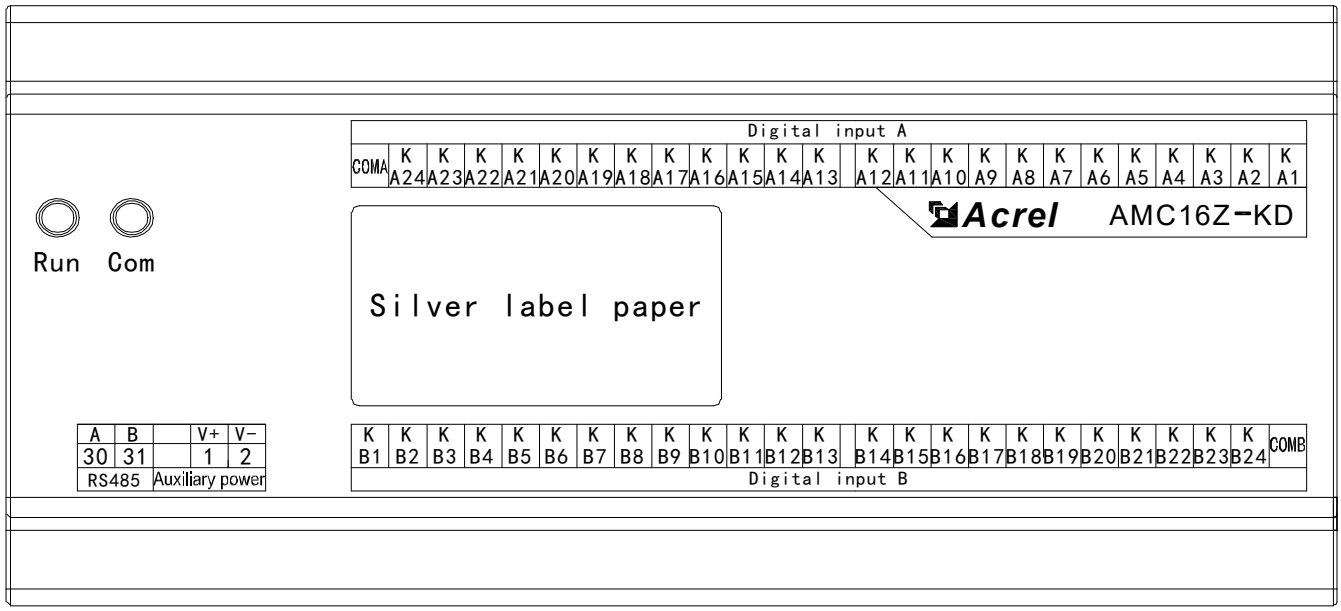
KB17	B-channel AC voltage B phase (6)	
KB18	B-channel AC voltage C phase (6)	
KB19	B-channel AC voltage A phase (7)	
KB20	B-channel AC voltage B phase (7)	
KB21	B-channel AC voltage C phase (7)	
KB22	B-channel AC voltage A phase (8)	
KB23	B-channel AC voltage B phase (8)	
KB24	B-channel AC voltage C phase (8)	

5.5 AMC16Z-KA



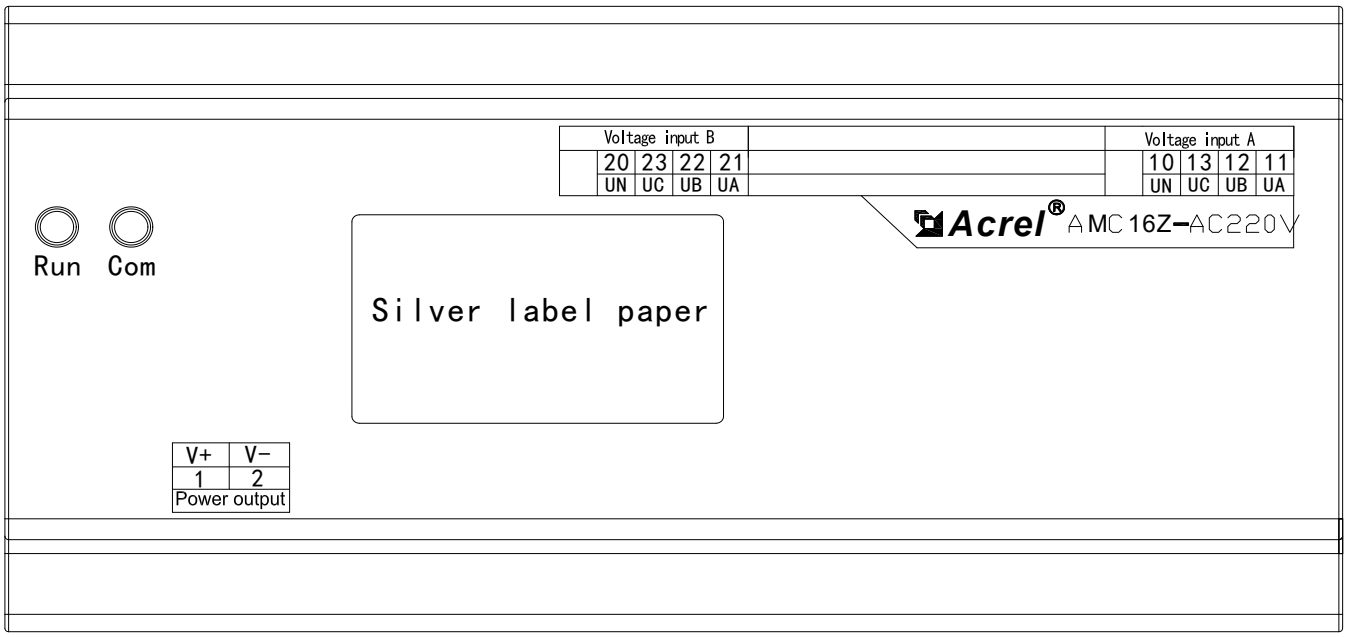
Numbering	definition	Explanation	Remarks
1	V+	Auxiliary power	Powered by AMC16Z-ZA
2	V-		
30	A	RS485 communication	Connect to touch screen or RS485 hub
31	B		
KA1-KA24		Switch A input	A channel active switch input(Route 24)
UNA			
KB1-KB24		Switch B input	B channel active switch input(Route 24)
UNB			

5.6 AMC16Z-KD



Numbering	definition	Explanation	Remarks
1	V+	Auxiliary power	Powered by AMC16Z-ZA
2	V-		
30	A	RS485 communication	Connect to touch screen or RS485 hub
31	B		
KA1-KA24		Switch A input	A channel active switch input(Route 24)
COMA			
KB1-KB24		Switch B input	B channel active switch input(Route 24)
COMB			

5.7 AMC16Z-AC220V



Numbering	definition	Explanation	Remarks
1	V+	Power Output	Power supply 12V to AMC16Z-FA, AMC16Z-KA, AMC16Z-KD and touch screen, **the power supply is forbidden to connect other devices (such as indicator light, buzzer)**
2	V-		
10	UN	A channel AC voltage neutral	A-channel outing three-phase current input
11	UA	A channel AC voltage A phase	
12	UB	A channel AC voltage B phase	
13	UC	A channel AC voltage C phase	
20	UN	B channel AC voltage neutral	B-channel outing three-phase current input
21	UA	B channel AC voltage A phase	
22	UB	B channel AC voltage B phase	
23	UC	B channel AC voltage C phase	

6 Communication protocol

This agreement provides the physical connection and communication protocol for data exchange between AMC16Z series AC precision power distribution monitoring device and data terminal equipment, which is similar to Modbus_RTU communication protocol.

6.1 Protocol overview

The communication protocol of AMC16Z series AC device defines the data sequence definition of address code, function code and check code in detail, which are necessary contents of specific data exchange.The protocol uses a master-slave connection (half duplex) on a single communication line, which means that signals travel in opposite directions on a single communication line. First, the signal from the main computer is addressed to a unique terminal device (slave), and then the reply signal from the terminal device is transmitted to the host in the opposite direction.

This protocol only allows communication between the host (PC, PLC, etc.) and the terminal equipment, but does not allow data exchange between independent terminal equipment, so that each terminal equipment will not occupy the communication line when they are initialized, and is limited to responding to the query signal arriving at the machine.

6.2 Transmission mode

The information transmission is asynchronous and takes bytes as the unit. The communication information between the host and slave is in 11-bit format, including 1 start bit, 8 data bits (the smallest effective bit is sent first), parity bit (no check), and 2 stop bits.

6.2.1 Data frame format

Address code	Function code	Data area	CRC check code
1 byte	1 byte	n bytes	2 bytes

6. 2. 2 Address field

The address field at the beginning of the frame, consists of a byte (8 bit binary code), with decimal 0 ~ 255. In our system, only 1 ~ 247 is used, and other addresses are reserved.These bits indicate the address of the user-specified

terminal device that will receive data from the host with which it is connected.The address of each terminal device must be unique, and only the terminal addressed to will respond to a query containing that address.When the terminal sends back a response, the slave address data in the response tells the host which terminal is communicating with it.

6. 2. 3 Function domain

The function domain code tells the addressed terminal what function to perform.The following table lists the function codes used in this series of devices, as well as their meanings and functions.

Code	Significance	Action
03	Read data register	Gets the current binary value of one or more registers
16	Preset multiple registers	Sets binary values to a series of multiple registers

6. 2. 4 Data domain

The data domain contains the data required by the terminal to perform a specific function or the data collected when the terminal responds to a query. The contents of this data may be numeric values, reference addresses, or setting values.For example, the function domain code tells the terminal to read a register, while the data domain needs to indicate which register to start and how many data to read. The embedded address and data vary according to the type and content of the slave.

6. 2. 5 Error check domain

This domain allows hosts and terminals to check for errors in transit.Sometimes, due to the electrical noise and other disturbance, a set of data from one device to another device online may occur some changes, error checking can ensure that the host or terminal not to response the changed in the process of transmitting data, this will improve the safety and efficiency of the system. The error checking uses 16 bits cyclic redundancy check (CRC16).

6. 2. 6 Method to check error

The error check field takes up two bytes and contains a 16-bit binary value.The CRC value is calculated by the transmission device, and then attached to the data frame. When receiving the data, the CRC value is recalculated by the receiving device, and then compared with the value in the received CRC field. If the two values are not equal, an error occurs.

When CRC operating, firstly a 16-bit register preset to all 1, and then the data frame in each byte of the 8 bits operate with the current value of the register, only each byte of 8 data bits to participate in the generation of CRC, starting and ending bits and possible use of parity bits do not affect the CRC.When generate CRC, each byte of eight different or with the contents of the registers, then the results transfer to the low displacement, high bits use "0", its least significant bit (LSB) removed and test, if it is 1, the register exclusive operate with a preset fixed value (0 a001h) . If the lowest is 0, do not make any processing.

The above process repeated, until the end of the eight times perform shift operation. When the last one (eighth bit) after shift operation, the next 8-bit bytes do XOR with the register current value, another eight times for the same shift xor operation. When all the bytes of a data frame processing, the final value is CRC value.

The process of generating a CRC :

⑴ A preset 16-bit register of 0FFFFH (all 1) is called the CRC register.

The 8 bits of the first byte in the data frame are xor operated with the low bytes in the CRC register, and the result is saved back to the CRC register.

Move the CRC register one bit to the right, fill in the highest bit with 0, detect and remove the lowest displacement.

If the lowest order is 0: repeat step 3 (next shift);If the lowest order is 1: the CRC register will do XOR with a preset fixed value (0A001H).

Repeat steps 3 and 4 until 8 shifts occur. This completes a full eight bits.

(2) Repeat steps 2 through 5 for the next 8 bits until all byte processing is complete.

The final value of the CRC register is the value of the CRC.

In addition, there is another method to calculate CRC by using the preset table. Its main characteristic is fast calculation speed, but the table needs large storage space. This method will not be repeated here, please refer to the relevant materials.

6.3 Introduction of function code

6.3.1 Function code 02H: read discrete input

This function code reads the continuous states from 1 to 2000 of discrete input. The request PDU specifies the starting address, the first input address and input number. In that way, Addressing input 1-16 is 0-15.The discrete input in the response message is divided into one input according to each bit in the data domain.Indicates states 1= ON and 0=OFF.The LSB (least significant bit) of the first data byte includes the input addressed in the query. The other inputs continue in this order up to the high end of the byte, and in the order from the low end to the high end of the subsequent byte.If the number of inputs returned is not a multiple of eight, the remaining bits in the last data byte (all the way to the top end of the byte) are filled with zeros.The number of bytes field indicates the total number of bytes of data.

The following example reads DI7~DI16 from 10 consecutive switch states of 01 slave device.

Mainframe send		Send Information
ADD code		01H
Function code		02H
Starting ADD	High byte	00H
	Low byte	06H
Output amount	High byte	00H
	Low byte	0AH
CRC check code	Low byte	18H
	High byte	0CH

Subordinative computer return		Return Information
ADD code		01H
Function code		02H
Number of bytes		02H
Input state 14-7		3FH
Input state 16-15		02H
CRC check code	Low byte	29H
	High byte	89H

The discrete input state 14-7 is represented as the hexadecimal byte value 3F, or binary 0011 1111. Input 14 is MSB of this byte, input 7 is LSB of this byte.

Represent the discrete input state 16-15 as the hexadecimal byte value 02, or binary 0000 0010.Input 15 is LSB, and zero fills the remaining bits in the last data byte.

6.3.2 Function code 03H: read register

This function allows users to obtain data and system parameters collected and recorded by the equipment. There is no limit to the number of requests a host can make, but they cannot exceed the defined address range.

The following example is from the 3 basic data collected by no.01 slave device (each address in the data frame occupies 2 bytes) Uab, Ubc and Uca. The Uab's address is 03H,, the Ubc's address is 04H and the Uca's address is 05H.

Mainframe send		Send Information
ADD code		01H
Function code		03H
Starting ADD	High byte	00H
	Low byte	03H
Number of Registers	High byte	00H
	Low byte	03H
CRC check code	Low byte	F5H
	High byte	CBH

Subordinative computer return		Return Information
ADD code		01H
Function code		03H
Byte number		06H
Register Data	High byte	0EH
	Low byte	EEH
Register Data	High byte	0EH
	Low byte	E8H
Register Data	High byte	0EH
	Low byte	E9H
CRC check	Low byte	8FH
	High byte	7EH

6.3.3 Function code 10H: write multiple registers

Function code 10H allows the user to change the contents of multiple registers. System parameters and switch output status of the instrument can be written with this function number.The host can write up to 16 (32 bytes) of data at a time.

The following example is a meter with a preset address of 01 that simultaneously outputs the switch quantity DO.Switch output status indicator register address is 0045H. The first bit corresponds to DO.

Mainframe send		Send Information
ADD code		01H
Function code		10H
Starting ADD	High byte	00H
	Low byte	45H
Number of Registers	High byte	00H
	Low byte	01H
Byte number		02H
0045H data to be written	High byte	00H
	Low byte	01H
CRC check code	Low byte	69H
	High byte	05H

Subordinative computer return		Return Information
ADD code		01H
Function code		10H
Starting ADD	High byte	00H
	Low byte	45H
Number of Registers	High byte	00H
	Low byte	01H
CRC check code	Low byte	10H
	High byte	1CH

6.4 Communication ADD

6.4.1 AMC16Z-ZA

Telemetry, remote control

Parameter area(0x00～0x2F)

Serial NO.	Variate	ADD	Read/write	Byte length	Unit	Data type	Remark
1	ADD	00H	R/W	1	NONE	Uint16	1～247
2	Baud rate	01H	R/W	1	NONE	Uint16	0：115200,1:2400, 2:4800,3：9600, 4:19200,5:38400,6:5 7600,7：115200
3	Check bit	02H	R/W	1	NONE	Uint16	0:Without check 1:Odd check 2:Even check
4	Wring method	03H	R/W	1	NONE	Uint16	0:Three-phase four-wire 1:Three-phase three-wire
5	Rated voltage	04H	R/W	1	V	Uint16	57,100,220,380
6	Rated current	05H	R/W	1	A	Uint16	1,5,100
7	Voltage ratio	06H	R/W	1	NONE	Uint16	1~9999
8	Incoming line1 current ratio	07H	R/W	1	NONE	Uint16	1~9999
9	Incoming line2 current ratio	08H	R/W	1	NONE	Uint16	1~9999
10	Relay output of the first way	09H	R/W	1	NONE	Uint16	
11	Relay output of the second way	0AH	R/W	1	NONE	Uint16	
12	Reserve	0BH	R/W	1	NONE	Uint16	
13	Reserve	0CH	R/W	1	NONE	Uint16	
14	Electrical energy reset	0DH	R/W	1	NONE	Uint16	Write with the 10H command 0x6601 Clear the first channel 0x6602 Clear the second channel 0x66ff all clear

Parameter data section(0x30～0x683)

Serial no.	Variate	ADD	Read/ write	Byte length	Unit	Data type	Remark
1	A Phase voltage (incoming line 1)	30H-31H	R	2	V	float	
2	B Phase voltage (incoming line 1)	32H-33H	R	2	V	float	
3	C Phase voltage (incoming line 1)	34H-35H	R	2	V	float	
4	AB line voltage (incoming line 1)	36H-37H	R	2	V	float	
5	BC line voltage (incoming line 1)	38H-39H	R	2	V	float	
6	CA line voltage (incoming line 1)	3AH-3BH	R	2	V	float	
7	Frequency (incoming line 1)	3CH-3DH	R	2	Hz	float	
8	A Phase current (incoming line 1)	3EH-3FH	R	2	A	float	
9	B Phase current (incoming line 1)	40H-41H	R	2	A	float	
10	C Phase current (incoming line 1)	42H-43H	R	2	A	float	
11	Active phase A (incoming line 1)	44H-45H	R	2	kW	float	
12	Active phase B (incoming line 1)	46H-47H	R	2	kW	float	
13	Active phase C (incoming line 1)	48H-49H	R	2	kW	float	
14	Total active (incoming line 1)	4AH-4BH	R	2	kW	float	
15	Phase A reactive power (incoming line 1)	4CH-4DH	R	2	kvar	float	
16	Phase B reactive power (incoming line 1)	4EH-4FH	R	2	kvar	float	
17	Phase C reactive power (incoming line 1)	50H-51H	R	2	kvar	float	
18	Total reactive power (incoming line 1)	52H-53H	R	2	kvar	float	
19	Phase A appears (incoming line 1)	54H-55H	R	2	kVA	float	
20	Phase B appears (incoming line 1)	56H-57H	R	2	kVA	float	
21	Phase C appears (incoming line 1)	58H-59H	R	2	kVA	float	
22	Total apparent (incoming line 1)	5AH-5BH	R	2	kVA	float	
23	A Phase power factor (incoming line 1)	5CH-5DH	R	2	NONE	float	
24	B Phase power factor (incoming line 1)	5EH-5FH	R	2	NONE	float	
25	C Phase power factor (incoming line 1)	60H-61H	R	2	NONE	float	
26	Total power factor (incoming line 1)	62H-63H	R	2	NONE		

						float	
27	Phase A active power (incoming line 1)	64H-65H	R	2	0.01kWh	Uint32	
28	PhaseB active power (incoming line 1)	66H-67H	R	2	0.01kWh	Uint32	
29	PhaseC active power (incoming line 1)	68H-69H	R	2	0.01kWh	Uint32	
30	Total active power (incoming line 1)	6AH-6BH	R	2	0.01kWh	Uint32	
31	Phase A reactive power (incoming line 1)	6CH-6DH	R	2	0.01kvarh	Uint32	
32	Phase B reactive power (incoming line 1)	6EH-6FH	R	2	0.01kvarh	Uint32	
33	Phase C reactive power (incoming line 1)	70H-71H	R	2	0.01kvarh	Uint32	
34	Total reactive power (incoming line 1)	72H-73H	R	2	0.01kvarh	Uint32	
35	Outgoing 1 voltage phase sequence status	74H	R	1	NONE	Uint16	
36	Phase A voltage (outgoing line)	140H-141H	R	2	V	float	
37	Phase B voltage (incoming line 2)	142H-143H	R	2	V	float	
38	Phase C voltage (incoming line 2)	144H-145H	R	2	V	float	
39	Phase AB line voltage (incoming line 2)	146H-147H	R	2	V	float	
40	Phase BC line voltage (incoming line 2)	148H-149H	R	2	V	float	
41	Phase CA line voltage (incoming line 2)	14AH-14 BH	R	2	V	float	
42	Frequency (incoming line 2)	14CH-14DH	R	2	Hz	float	
43	A Phase current (incoming line 2)	14EH-14FH	R	2	A	float	
44	B Phase current (incoming line 2)	150H-151H	R	2	A	float	
45	C Phase current (incoming line 2)	152H-153H	R	2	A	float	
46	Active phase A (incoming line 2)	154H-155H	R	2	kW	float	
47	Active phase B (incoming line 2)	156H-157H	R	2	kW	float	
48	Active phase C (incoming line 2)	158H-159H	R	2	kW	float	
49	Total active power (incoming line 2)	15AH-15 BH	R	2	kW	float	
50	Reactive phase A (incoming line 2)	15CH-15DH	R	2	kvar	float	
51	Reactive phase B(incoming line 2)	15EH-15 FH	R	2	kvar	float	
52	Reactive phase C (incoming line 2)	160H-161H	R	2	kvar	float	
53	Total reactive power (incoming line 2)	162H-163H	R	2	kvar	float	
54	Phase A appear (incoming line 2)	164H-165H	R	2	kVA	float	
55	Phase B appear (incoming line 2)	166H-167H	R	2	kVA	float	
56	Phase C appear (incoming line 2)	168H-169H	R	2	kVA	float	
57	Total apparent (incoming line 2)	16AH-16 BH	R	2	kVA	float	
58	Phase A power factor (incoming line 2)	16CH-16 DH	R	2	NONE	float	
59	Phase B power factor (incoming line 2)	16EH-16 FH	R	2	NONE	float	

60	Phase C power factor (incoming line 2)	170H-171H	R	2	NONE	float	
61	Total power factor (incoming line 2)	172H-173H	R	2	NONE	float	
62	Phase A active power (incoming line 2)	174H-175H	R	2	0.01kWh	Uint32	
63	PhaseB active power (incoming line 2)	176H-177H	R	2	0.01kWh	Uint32	
64	PhaseC active power (incoming line 2)	178H-179H	R	2	0.01kWh	Uint32	
65	Total active power (incoming line 2)	17AH-17 BH	R	2	0.01kWh	Uint32	
66	Phase A reactive power (incoming line 2)	17CH-17 DH	R	2	0.01kvarh	Uint32	
67	Phase B reactive power (incoming line 2)	17EH-17 FH	R	2	0.01kvarh	Uint32	
68	Phase C reactive power (incoming line 2)	180H-181H	R	2	0.01kvarh	Uint32	
69	Total reactive power (incoming line 2)	182H-183H	R	2	0.01kvarh	Uint32	
70	Outgoing 2 voltage phase sequence status	184H	R	1	NONE	Uint16	
71	A phase total voltage harmonic content(outgoing line 1 section)	250H	R	1	0.01%	Uint16	
72	A phase voltage 2-63 times harmonic content(outgoing line 1 section)	251H-28 EH	R	1	0.01%	Uint16	
73	B phase voltage total harmonic content(outgoing line 1 section)	28FH	R	1	0.01%	Uint16	
74	B phase voltage 2-63 times harmonic content(outgoing line 1 section)	290H-2DH	R	1	0.01%	Uint16	
75	C phase voltage total harmonic content(outgoing line 1 section)	2CEH	R	1	0.01%	Uint16	
76	C phase voltage 2-63 times harmonic content(outgoing line 1 section)	2CFH-30CH	R	1	0.01%	Uint16	
77	A phase voltage total harmonic content(outgoing line 2 section)	30DH	R	1	0.01%	Uint16	
78	A phase voltage 2-63 times harmonic content(outgoing line 2 section)	30EH-34BH	R	1	0.01%	Uint16	
79	B phase voltage total harmonic content(outgoing line 2 section)	34CH	R	1	0.01%	Uint16	
80	B phase voltage 2-63 times harmonic content(outgoing line 2 section)	34DH-38AH	R	1	0.01%	Uint16	
81	C phase voltage total harmonic content(outgoing line 2 section)	38BH	R	1	0.01%	Uint16	
82	C phase voltage 2-63 times harmonic content(outgoing line 2 section)	38CH-3C9H	R	1	0.01%	Uint16	
83	A phase total current harmonic content((outgoing line 1 section)	3CAH	R	1	0.01%	Uint16	
84	A phase current 2-63 times harmonic content(outgoing line 1 section)	3CBH-408H	R	1	0.01%	Uint16	
85	B phase total current harmonic content((outgoing line 1 section)	409H	R	1	0.01%	Uint16	
86	B phase current 2-63 times harmonic content(outgoing line 1 section)	40AH-447H	R	1	0.01%	Uint16	
87	C phase total current harmonic content((outgoing line 1 section)	448H	R	1	0.01%	Uint16	
88	C phase current 2-63 times harmonic content(outgoing line 1 section)	449H-486H	R	1	0.01%	Uint16	
89	A phase total current harmonic content((outgoing line 2 section)	487H	R	1	0.01%	Uint16	
90	A phase current 2-63 times harmonic content(outgoing line 2 section)	488H-4C 5H	R	1	0.01%	Uint16	
91	B phase total current harmonic content((outgoing line 2 section)	4C6H	R	1	0.01%	Uint16	

92	B phase current 2-63 times harmonic content(outgoing line 2 section)	4C7H-504H	R	1	0.01%	Uint16	
93	C phase total current harmonic content((outgoing line 2 section)	505H	R	1	0.01%	Uint16	
94	C phase current 2-63 times harmonic content(outgoing line 2 section)	506H-543H	R	1	0.01%	Uint16	
95	Fundamental total active power (incoming line 1)	5EAH-5EBH	R	2	kW	float	
96	Fundamental total active power (incoming line 2)	5ECH-5EDH	R	2	kW	float	
97	Total harmonic active power (incoming line 1)	5EEH-5E FH	R	2	kW	float	
98	Total harmonic active power (incoming line 2)	5F0H-5F1H	R	2	kW	float	
99	1 section neutral voltage	5F2H-5F3H	R	2	V	Float	
100	2 section neutral voltage	5F4H-5F5H	R	2	V	float	
101	1 section neutral current	5F6H-5F7H	R	2	A	Float	
102	2 section neutral current	5F8H-5F9H	R	2	A	float	
103	temperature	5FAH-5F BH	R	2	℃	Float	
104	humidity	5FCH-5F DH	R	2	RH	Float	
105	1 section Leakage	5FEH-5FFH	R	2	mA	float	
106	2 section Leakage	600H-601H	R	2	mA	Float	
107	Fundamental A phase active (incoming line 1)	604H-605H	R	2	kW	float	
108	Fundamental B active phase (incoming line 1)	606H-607H	R	2	kW	float	
109	Fundamental C active phase (incoming line 1)	608H-609H	R	2	kW	float	
110	Fundamental total active power (incoming line 1)	60AH-60 BH	R	2	kW	float	
111	Fundamental A phase reactive (incoming line 1)	60CH-60 DH	R	2	kvar	float	
112	Fundamental B phase reactive (incoming line 1)	60EH-60 FH	R	2	kvar	float	
113	Fundamental C phase reactive (incoming line 1)	610H-611H	R	2	kvar	float	
114	Fundamental total reactive power (incoming line 1)	612H-613H	R	2	kvar	float	
115	Fundamental A phase apparent (incoming line 1)	614H-615H	R	2	kVA	float	
116	Fundamental B phase apparent (incoming line 1)	616H-617H	R	2	kVA	float	
117	Fundamental C phase apparent (incoming line 1)	618H-619H	R	2	kVA	float	
118	Fundamental total apparent (incoming line 1)	61AH-61 BH	R	2	kVA	float	
119	Harmonic phase A active power (incoming line 1)	61CH-61 DH	R	2	kW	float	
120	Harmonic phase B active power (incoming line 1)	61EH-61 FH	R	2	kW	float	
121	Harmonic phase C active power (incoming line 1)	620H-621H	R	2	kW	float	
122	Total harmonic active power (incoming line 1)	622H-623H	R	2	kW	float	
123	Harmonic A phase reactive power (incoming line 1)	624H-625H	R	2	kvar	float	
124	Harmonic B phase reactive power (incoming line 1)	626H-627H	R	2	kvar	float	

125	Harmonic C phase reactive power (incoming line 1)	628H-629H	R	2	kvar	float	
126	Total harmonic reactive power (incoming line 1)	62AH-62 BH	R	2	kvar	float	
127	Harmonic A phase apparent (incoming line 1)	62CH-62 DH	R	2	kVA	float	
128	Harmonic B phase apparent (incoming line 1)	62EH-62 FH	R	2	kVA	float	
129	Harmonic C phase apparent (incoming line 1)	630H-631H	R	2	kVA	float	
130	Total harmonic apparent (incoming line 1)	632H-633H	R	2	kVA	float	
131	Fundamental A phase active (incoming line 2)	634H-635H	R	2	kW	float	
132	Fundamental B phase active (incoming line 2)	636H-636H	R	2	kW	float	
133	Fundamental C phase active (incoming line 2)	638H-639H	R	2	kW	float	
134	Fundamental total active power (incoming line 2)	63AH-63 BH	R	2	kW	float	
135	Fundamental A phase reactive (incoming line 2)	63CH-63 DH	R	2	kvar	float	
136	Fundamental B phase reactive (incoming line 2)	63EH-63 FH	R	2	kvar	float	
137	Fundamental C phase reactive (incoming line 2)	640H-641H	R	2	kvar	float	
138	Fundamental total reactive power (incoming line 2)	642H-643H	R	2	kvar	float	
139	Fundamental A phase apparent (incoming line 2)	644H-645H	R	2	kVA	float	
140	Fundamental B phase apparent (incoming line 2)	646H-647H	R	2	kVA	float	
141	Fundamental C phase apparent (incoming line 2)	648H-649H	R	2	kVA	float	
142	Total fundamental apparent (incoming line 2)	64AH-64 BH	R	2	kVA	float	
143	Harmonic phase A active power (incoming line 2)	64CH-64 DH	R	2	kW	float	
144	Harmonic phase B active power (incoming line 2)	64EH-64 FH	R	2	kW	float	
145	Harmonic phase C active power (incoming line 2)	650H-651H	R	2	kW	float	
146	Harmonic total active power (incoming line 2)	652H-653H	R	2	kW	float	
147	Harmonic phase A reactive power (incoming line 2)	654H-655H	R	2	kvar	float	
148	Harmonic phase B reactive power (incoming line 2)	656H-657H	R	2	kvar	float	
149	Harmonic phase C reactive power (incoming line 2)	658H-659H	R	2	kvar	float	
150	Harmonic total reactive power (incoming line 2)	65AH-65 BH	R	2	kvar	float	
151	Harmonic A phase apparent (incoming line 2)	65CH-65 DH	R	2	kVA	float	
152	Harmonic B phase apparent (incoming line 2)	65EH-65FH	R	2	kVA	float	
153	Harmonic C phase apparent (incoming line 2)	660H-661H	R	2	kVA	float	
154	Total harmonic apparent (incoming line 2)	662H-663H	R	2	kVA	float	
155	Fundamental A phase active (incoming	664H-665H	R	2	0.01kWh	Uint32	

	line 1)						
156	Fundamental B phase active (incoming line 1)	666H-667H	R	2	0.01kWh	Uint32	
157	Fundamental C phase active (incoming line 1)	668H-669H	R	2	0.01kWh	Uint32	
158	Fundamental total active power (incoming line 1)	66AH-66BH	R	2	0.01kWh	Uint32	
159	Fundamental phase A reactive power (incoming line 1)	66CH-66 DH	R	2	0.01kvar	Uint32	
160	Fundamental phase B reactive power (incoming line 1)	66EH-66 FH	R	2	0.01kvar	Uint32	
161	Fundamental phase C reactive power (incoming line 1)	670H-671H	R	2	0.01kvar	Uint32	
162	Fundamental total reactive power (incoming line 1)	672H-673H	R	2	0.01kvar	Uint32	
163	Fundamental phase A active power (incoming line 2)	674H-675H	R	2	0.01kWh	Uint32	
164	Fundamental phase B active power (incoming line 2)	676H-677H	R	2	0.01kWh	Uint32	
165	Fundamental phase C reactive power (incoming line 2)	678H-679H	R	2	0.01kWh	Uint32	
166	Fundamental total active power (incoming line 2)	67AH-67 BH	R	2	0.01kWh	Uint32	
167	Fundamental phase A reactive power (incoming line 2)	67CH-67 DH	R	2	0.01kvar	Uint32	
168	Fundamental phase B active power (incoming line 2)	67EH-67 FH	R	2	0.01kvar	Uint32	
169	Fundamental phase C active power (incoming line 2)	680H-681H	R	2	0.01kvar	Uint32	
170	Fundamental total reactive power (incoming line 2)	682H-683H	R	2	0.01kvar	Uint32	

Remote signalling

Serial no.	Variate	ADD	Read& write	Remark
1	The first way on-off input	00H	R	0 invalid ,1 valid
2	The second way on-off input	01H	R	Ditto
3	The third way on-off input	02H	R	Ditto
4	The fourth way on-off input	03H	R	Ditto
5	The fifth way on-off input	04H	R	Ditto
6	The sixth way on-off input	05H	R	Ditto
7	Reserve	06H	R	Ditto
8	Reserve	07H	R	Ditto
9	The first way out state	08H	R	Ditto
10	The second way out state	09H	R	Ditto

6.4.2 AMC16Z-FA

Telemetry, remote control

Parameter area(0x00～0x2F)

No.	Variable	Address	Read / Write	Word Length	Unit	Data Type	Remarks
1	Address	00H	R/W	1	NONE	Uint16	1～247
2	Baud rate	01H	R/W	1	NONE	Uint16	0:115200, 1:2400,

							2:4800, 3:9600, 4:19200,
3	Check digit	02H	R/W	1	NONE	Uint16	0:No check digit 1:odd parity 2:Even parity
4	Wiring method	03H	R/W	1	NONE	Uint16	0:3P4L 1:3P3L
5	Rated voltage	04H	R/W	1	V	Uint16	57,100,220,380
6	Rated current	05H	R/W	1	A	Uint16	50,100,200
7	Voltage transformation ratio	06H	R/W	1	NONE	Uint16	1～9999
8	1 Incoming current ratio	07H	R/W	1	NONE	Uint16	1～9999
9	2 Incoming current ratio	08H	R/W	1	NONE	Uint16	1～9999
10	Spare	09H	R/W	1	NONE	Uint16	
11	Spare	0AH	R/W	1	NONE	Uint16	
12	Spare	0AH	R/W	1	NONE	Uint16	
13	Spare	0AH	R/W	1	NONE	Uint16	
14	Energy reset	0DH	R/W	1	NONE	Uint16	Write with 10H command 0x6601 Clear the first road 0x6602 Clear the second road The rest is the same 0x66ff all clear
15	Spare	0EH	R/W	1	NONE	Uint16	
16	I outlet 1 phase A	0FH	R/W	1	NONE	Uint16	0x0001 phase A 0x0002 phase B 0x0003 phase C
17	I outlet 2 phaseB	10H	R/W	1	NONE	Uint16	Same as above
18	I outlet 3 phaseC	11H	R/W	1	NONE	Uint16	Same as above
19	I outlet 4 phase A	12H	R/W	1	NONE	Uint16	Same as above
20	I outlet 5 phaseB	13H	R/W	1	NONE	Uint16	Same as above
21	I outlet 6 phaseC	14H	R/W	1	NONE	Uint16	Same as above
22	I outlet 7 phase A	15H	R/W	1	NONE	Uint16	Same as above
23	I outlet 8 phaseB	16H	R/W	1	NONE	Uint16	Same as above
24	I outlet 9 phaseC	17H	R/W	1	NONE	Uint16	Same as above
25	I outlet 10 phase A	18H	R/W	1	NONE	Uint16	Same as above
26	I outlet 11 phase B	19H	R/W	1	NONE	Uint16	Same as above
27	I outlet 12 phase C	1AH	R/W	1	NONE	Uint16	Same as above
28	II outlet 13 phase A	1BH	R/W	1	NONE	Uint16	Same as above
29	II outlet 14 phase B	1CH	R/W	1	NONE	Uint16	Same as above
30	II outlet 15 phase C	1DH	R/W	1	NONE	Uint16	Same as above
31	II outlet 16 phase A	1EH	R/W	1	NONE	Uint16	Same as above

32	II outlet 17 phase B	1FH	R/W	1	NONE	Uint16	Same as above
33	II outlet 18 phase C	20H	R/W	1	NONE	Uint16	Same as above
34	II outlet 19 phase A	21H	R/W	1	NONE	Uint16	Same as above
35	II outlet 20 phase B	22H	R/W	1	NONE	Uint16	Same as above
36	II outlet 21 phase C	23H	R/W	1	NONE	Uint16	Same as above
37	II outlet 22 phase A	24H	R/W	1	NONE	Uint16	Same as above
38	II outlet 23 phase B	25H	R/W	1	NONE	Uint16	Same as above
39	II outlet 24 phase C	26H	R/W	1	NONE	Uint16	Same as above

Electrical parameter data area(0x30～0x619)

No.	Variable	Address	Read / Write	Write Word Length	Unit	Data Type	Remarks
1	I outlet 1 phase voltage A	30H-31H	R	2	V	float	
2	I outlet 2 phase voltage B	32H-33H	R	2	V	float	
3	I outlet 3 phase voltage C	34H-35H	R	2	V	float	
4	I outlet 4 phase voltage A	36H-37H	R	2	V	float	
5	I outlet 5 phase voltage B	38H-39H	R	2	V	float	
6	I outlet 6 phase voltage C	3AH-3BH	R	2	V	float	
7	I outlet 7 phase voltage A	3CH-3DH	R	2	V	float	
8	I outlet 8 phase voltage B	3EH-3FH	R	2	V	float	
9	I outlet 9 phase voltage C	40H-41H	R	2	V	float	
10	I outlet 10 phase voltage A	42H-43H	R	2	V	float	
11	I outlet 11 phase voltage B	44H-45H	R	2	V	float	
12	I outlet 12 phase voltage C	46H-47H	R	2	V	float	
13	II outlet 13 phase voltage A	48H-49H	R	2	V	float	
14	II outlet 14 phase voltage B	4AH-4BH	R	2	V	float	
15	II outlet 15 phase voltage C	4CH-4DH	R	2	V	float	
16	II outlet 16 phase voltage A	4EH-4FH	R	2	V	float	
17	II outlet 17 phase voltage B	50H-51H	R	2	V	float	
18	II outlet 18 phase voltage C	52H-53H	R		V	float	
19	II outlet 19 phase voltage A	54H-55H	R	2	V	float	
20	II outlet 20 phase voltage B	56H-57H	R	2	V	float	
21	II outlet 21 phase voltage C	58H-59H	R	2	V	float	
22	II outlet 22 phase voltage A	5AH-5BH	R	2	V	float	
23	II outlet 23 phase voltage B	5CH-5DH	R	2	V	float	
24	II outlet 24 phase voltage C	5EH-5FH	R	2	V	float	
25	I outlet 1 line voltage A	60H-61H	R	2	V	float	
26	I outlet 2 line voltage B	62H-63H	R	2	V	float	
27	I outlet 3 line voltage C	64H-65H	R	2	V	float	
28	I outlet 4 line voltage A	66H-67H	R	2	V	float	

29	I outlet 5 line voltage B	68H-69H	R	2	V	float	
30	I outlet 6 line voltage C	6AH-6BH	R	2	V	float	
31	I outlet 7 line voltage A	6CH-6DH	R	2	V	float	
32	I outlet 8 line voltage B	6EH-6FH	R	2	V	float	
33	I outlet 9 line voltage C	70H-71H	R	2	V	float	
34	I outlet 10 line voltage A	72H-73H	R	2	V	float	
35	I outlet 11 line voltage B	74H-75H	R	2	V	float	
36	I outlet 12 line voltage C	76H-77H	R	2	V	float	
37	I outlet 13 line voltage A	78H-79H	R	2	V	float	
38	I outlet 14 line voltage B	7AH-7BH	R	2	V	float	
39	I outlet 15 line voltage C	7CH-7DH	R	2	V	float	
40	II outlet 16 line voltage A	7EH-7FH	R	2	V	float	
41	II outlet 17 line voltage B	80H-81H	R	2	V	float	
42	II outlet 18 line voltage C	82H-83H	R	2	V	float	
43	II outlet 19 line voltage A	84H-85H	R	2	V	float	
44	II outlet 20 line voltage B	86H-87H	R	2	V	float	
45	II outlet 21 line voltage C	88H-89H	R	2	V	float	
46	II outlet 22 line voltage A	8AH-8BH	R	2	V	float	
47	II outlet 23 line voltage B	8CH-8DH	R	2	V	float	
48	II outlet 24 line voltage C	8EH-8FH	R	2	V	float	
49	I outlet 1 current A	90H-91H	R	2	A	loat	
50	I outlet 2 current B	92H-93H	R	2	A	float	
51	I outlet 3 current C	94H-95H	R	2	A	float	
52	I outlet 4 current A	96H-97H	R	2	A	float	
53	I outlet 5 current B	98H-99H	R	2	A	float	
54	I outlet 6 current C	9AH-9BH	R	2	A	float	
55	I outlet 7 current A	9CH-9DH	R	2	A	float	
56	I outlet 8 current B	9EH-9FH	R	2	A	float	
57	I outlet 9 current C	A0H-A1H	R	2	A	float	
58	I outlet 10 current A	A2H-A3H	R	2	A	float	
59	I outlet 11 current B	A4H-A5H	R	2	A	float	
60	I outlet 12 current C	A6H-A7H	R	2	A	float	

61	II outlet 13 current A	A8H-A9H	R	2	A	float	
62	II outlet 14 current B	AAH-ABH	R	2	A	float	
63	II outlet 15 current C	ACH-ADH	R	2	A	float	
64	II outlet 16 current A	AEH-AFH	R	2	A	float	
65	II outlet 17 current B	B0H-B1H	R	2	A	float	
66	II outlet 18 current C	B2H-B3H	R	2	A	float	
67	II outlet 19 current A	B4H-B5H	R	2	A	float	
68	II outlet 20 current B	B6H-B7H	R	2	A	float	
69	II outlet 21 current C	B8H-B9H	R	2	A	float	
70	II outlet 22 current A	BAH-BBH	R	2	A	float	
71	II outlet 23 current B	BCH-BDH	R	2	A	float	
72	II outlet 24 current C	BEH-BFH	R	2	A	float	
73	Section I outlet 1 active A	C0H-C1H	R	2	kW	float	
74	Section I outlet 2 active B	C2H-C3H	R	2	kW	float	
75	Section I outlet 3 active C	C4H-C5H	R	2	kW	float	
76	Section I outlet 4 active A	C6H-C7H	R	2	kW	float	
77	Section I outlet 5 active B	C8H-C9H	R	2	kW	float	
78	Section I outlet 6 active C	CAH-CBH	R	2	kW	float	
79	Section I outlet 7 active A	CCH-CDH	R	2	kW	float	
80	Section I outlet 8 active B	CEH-CFH	R	2	kW	float	
81	Section I outlet 9 active C	D0H-D1H	R	2	kW	float	
82	Section I outlet 10 active A	D2H-D3H	R	2	kW	float	
83	Section I outlet 11 active B	D4H-D5H	R	2	kW	float	
84	Section I outlet 12 active C	D6H-D7H	R	2	kW	float	
85	Section I outlet 13 active A	D8H-D9H	R	2	kW	float	
86	Section I outlet 14 active B	DAH-DBH	R	2	kW	float	
87	Section II outlet 15 active C	DCH-DDH	R	2	kW	float	
88	Section II outlet 16 active A	DEH-DFH	R	2	kW	float	
89	Section II outlet 17 active B	E0H-E1H	R	2	kW	float	

90	Section II outlet 18 active C	E2H-E3H	R	2	kW	float	
91	Section III outlet 19 active A	E4H-E5H	R	2	kW	float	
92	Section II outlet 20 active B	E6H-E7H	R	2	kW	float	
93	Section II outlet 21 active C	E8H-E9H	R	2	kW	float	
94	Section II outlet 22 active A	EAH-EBH	R	2	kW	float	
95	Section II outlet 23 active B	ECH-EDH	R	2	kW	float	
96	Section II outlet 24 active C	EEH-EFH	R	2	kW	float	
97	Section I outlet 1 reactive A	F0H-F1H	R	2	kvar	float	
98	I outlet 2 reactive B	F2H-F3H	R	2	kvar	float	
99	I outlet 3 reactive C	F4H-F5H	R	2	kvar	float	
100	I outlet 4 reactive A	F6H-F7H	R	2	kvar	float	
101	I outlet 5 reactive B	F8H-F9H	R	2	kvar	float	
102	I outlet 6 reactive C	FAH-FBH	R	2	kvar	float	
103	I outlet 7 reactive A	FCH-FDH	R	2	kvar	float	
104	I outlet 8 reactive B	FEH-FFH	R	2	kvar	float	
105	I outlet 9 reactive C	100H-101H	R	2	kvar	float	
106	I outlet 10 reactive A	102H-103H	R	2	kvar	float	
107	I outlet 11 reactive B	104H-105H	R	2	kvar	float	
108	I outlet 12 reactive C	106H-107H	R	2	kvar	float	
109	II outlet 13 reactive A	108H-109H	R	2	kvar	float	
110	II outlet 14 reactive B	10AH-10BH	R	2	kvar	float	
111	II outlet 15 reactive C	10CH-10DH	R	2	kvar	float	
112	II outlet 16 reactive A	10EH-10FH	R	2	kvar	float	
113	II outlet 17 reactive B	110H-111H	R	2	kvar	float	
114	II outlet 18 reactive C	112H-113H	R	2	kvar	float	
115	II outlet 19 reactive A	114H-115H	R	2	kvar	float	
116	II outlet 20 reactive B	116H-117H	R	2	kvar	float	
117	II outlet 21 reactive C	118H-119H	R	2	kvar	float	
118	II outlet 22 reactive A	11AH-11BH	R	2	kvar	float	
119	II outlet 23 reactive B	11CH-11DH	R	2	kvar	float	

120	II outlet 24 reactive C	11EH-11FH	R	2	kvar	float	
121	I outlet 1 apparent A	120H-121H	R	2	kVA	float	
122	I outlet 2 apparent B	122H-123H	R	2	kVA	float	
123	I outlet 3 apparent C	124H-125H	R	2	kVA	float	
124	I outlet 4 apparent A	126H-127H	R	2	kVA	float	
125	I outlet 5 apparent B	128H-129H	R	2	kVA	float	
126	I outlet 6 apparent C	12AH-12BH	R	2	kVA	float	
127	I outlet 7 apparent A	12CH-12DH	R	2	kVA	float	
128	I outlet 8 apparent B	12EH-12FH	R	2	kVA	float	
129	I outlet 9 apparent C	130H-131H	R	2	kVA	float	
130	I outlet 10 apparent A	132H-133H	R	2	kVA	float	
131	I outlet 11 apparent B	134H-135H	R	2	kVA	float	
132	I outlet 12 apparentC	136H-137H	R	2	kVA	float	
133	II outlet 13 apparent A	138H-139H	R	2	kVA	float	
134	II outlet 14 apparent B	13AH-13BH	R	2	kVA	float	
135	II outlet 15 apparent C	13CH-13DH	R	2	kVA	float	
136	II outlet 16 apparent A	13EH-13FH	R	2	kVA	float	
137	II outlet 17 apparent B	140H-141H	R	2	kVA	float	
138	II outlet 18 apparent C	142H-143H	R	2	kVA	float	
139	II outlet 19 apparent A	144H-145H	R	2	kVA	float	
140	II outlet 20 apparent B	146H-147H	R	2	kVA	float	
141	II outlet 21 apparent C	148H-149H	R	2	kVA	float	
142	II outlet 22 apparent A	14AH-14BH	R	2	kVA	float	
143	II outlet 23 apparent B	14CH-14DH	R	2	kVA	float	
144	II outlet 24 apparent C	14EH-14FH	R	2	kVA	float	
145	I outlet 1 factor A	150H-151H	R	2	NONE	float	
146	I outlet 2 factor B	152H-153H	R	2	NONE	float	
147	I outlet 3 factor C	154H-155H	R	2	NONE	float	
148	I outlet 4 factor A	156H-157H	R	2	NONE	float	
149	I outlet 5 factor B	158H-159H	R	2	NONE	float	

150	I outlet 6 factor C	15AH-15BH	R	2	NONE	float	
151	I outlet 7 factor A	15CH-15DH	R	2	NONE	float	
152	I outlet 8 factor B	15EH-15FH	R	2	NONE	float	
153	I outlet 9 factor C	160H-161H	R	2	NONE	float	
154	I outlet 10 factor A	162H-163H	R	2	NONE	float	
155	I outlet 11 factor B	164H-165H	R	2	NONE	float	
156	I outlet 12 factorC	166H-167H	R	2	NONE	float	
157	II outlet 13 factor A	168H-169H	R	2	NONE	float	
158	II outlet 14 factor B	16AH-16BH	R	2	NONE	float	
159	II outlet 15 factor C	16CH-16DH	R	2	NONE	float	
160	II outlet 16 factor A	16EH-16FH	R	2	NONE	float	
161	II outlet 17 factor B	170H-171H	R	2	NONE	float	
162	II outlet 18 factor C	172H-173H	R	2	NONE	float	
163	II outlet 19 factor A	174H-175H	R	2	NONE	float	
164	II outlet 20 factor B	176H-177H	R	2	NONE	float	
165	II outlet 21 factor C	178H-179H	R	2	NONE	float	
166	II outlet 22 factor A	17AH-17BH	R	2	NONE	float	
167	II outlet 23 factor B	17CH-17DH	R	2	NONE	float	
168	II outlet 24 factor C	17EH-17FH	R	2	NONE	float	
169	I outlet 123 frequency ABC	180H-181H	R	2	HZ	float	
170	I outlet 456 frequency ABC	182H-183H	R	2	HZ	float	
171	I outlet 789 frequency ABC	184H-185H	R	2	HZ	float	
172	I outlet 10,11,12 frequency ABC	186H-187H	R	2	HZ	float	
173	II outlet 13,14,15 frequency ABC	188H-189H	R	2	HZ	float	
174	II outlet 16,17,18 frequency ABC	18AH-18BH	R	2	HZ	float	
175	II outlet 19,20,21 frequency	18CH-18DH	R	2	HZ	float	
176	II outlet 22,23,24 frequency	18EH-18FH	R	2	HZ	float	
177	I outlet 1,2,3 active ABC	190H-191H	R	2	kW	float	
178	I outlet 4,5,6 active ABC	192H-193H	R	2	kW	float	
179	I outlet 7,8,9 active ABC	194H-195H	R	2	kW	float	

180	I outlet 10,11,12 active ABC	196H-197H	R	2	kW	float	
181	II outlet 13,14,15 active ABC	198H-199H	R	2	kW	float	
182	II outlet 16,17,18 active ABC	19AH-19BH	R	2	kW	float	
183	II outlet 19,20,21 active ABC	19CH-19DH	R	2	kW	float	
184	II outlet 22,23,24 active ABC	19EH-19FH	R	2	kW	float	
185	I outlet 1,2,3 reactive ABC	1A0H-1A1H	R	2	kvar	float	
186	I outlet4,5,6 reactive ABC	1A2H-1A3H	R	2	kvar	float	
187	I outlet 7,8,9 reactive ABC	1A4H-1A5H	R	2	kvar	float	
188	I outlet 10,11,12 reactive ABC	1A6H-1A7H	R	2	kvar	float	
189	II outlet 13,14,15 reactive ABC	1A8H-1A9H	R	2	kvar	float	
190	II outlet 16,17,18 reactive ABC	1AAH-1AB H	R	2	kvar	float	
191	II outlet 19,20,21 reactive ABC	1ACH-1AD H	R	2	kvar	float	
192	II outlet 22,23,24 reactive ABC	1AEH-1AFH	R	2	kvar	float	
193	I outlet 1,2,3 apparent ABC	1B0H-1B1H	R	2	kVA	float	
194	I outlet 4,5,6 apparent ABC	1B2H-1B3H	R	2	kVA	float	
195	I outlet 7,8,9 apparent ABC	1B4H-1B5H	R	2	kVA	float	
196	I outlet 10,11,12 apparent ABC	1B6H-1B7H	R	2	kVA	float	
197	II outlet 13,14,15 apparent ABC	1B8H-1B9H	R	2	kVA	float	
198	II outlet 16,17,18 apparent ABC	1BAH-1BBH	R	2	kVA	float	
199	II outlet 19,20,21 apparent ABC	1BCH-1BDH	R	2	kVA	float	
200	II outlet 22,23,24 apparent ABC	1BEH-1BFH	R	2	kVA	float	
201	I outlet 1,2,3 factor ABC	1C0H-1C1H	R	2	NONE	float	
202	I outlet 4,5,6 factor ABC	1C2H-1C3H	R	2	NONE	float	
203	I outlet 7,8,9 factor ABC	1C4H-1C5H	R	2	NONE	float	
204	I outlet 10,11,12 factor ABC	1C6H-1C7H	R	2	NONE	float	
205	II outlet 13,14,15 factor ABC	1C8H-1C9H	R	2	NONE	float	
206	II outlet 16,17,18 factor ABC	1CAH-1CBH	R	2	NONE	float	
207	II outlet 19,20,21 factor ABC	1CCH-1CDH	R	2	NONE	float	
208	II outlet 22,23,24 factor ABC	1CEH-1CFH	R	2	NONE	float	
	Section I outlet 1 active energy A				0.01kWh		

209		1D0H-1D1H	R	2		Uint32	
210	Section I outlet 2 active energy B	1D2H-1D3H	R	2	0.01kWh	Uint32	
211	Section I outlet 3 active energy C	1D4H-1D5H	R	2	0.01kWh	Uint32	
212	Section I outlet 4 active energy A	1D6H-1D7H	R	2	0.01kWh	Uint32	
213	Section I outlet 5 active energy B	1D8H-1D9H	R	2	0.01kWh	Uint32	
214	Section I outlet 6 active energy C	1DAH-1DB H	R	2	0.01kWh	Uint32	
215	Section I outlet 7 active energy A	1DCH-1DD H	R	2	0.01kWh	Uint32	
216	Section I outlet 8 active energy B	1DEH-1DFH	R	2	0.01kWh	Uint32	
217	Section I outlet 9 active energy C	1E0H-1E1H	R	2	0.01kWh	Uint32	
218	Section I outlet 10 active energy A	1E2H-1E3H	R	2	0.01kWh	Uint32	
219	Section I outlet 11 active energy B	1E4H-1E5H	R	2	0.01kWh	Uint32	
220	Section I outlet 12 active energy C	1E6H-1E7H	R	2	0.01kWh	Uint32	
221	Section II outlet 13 active energy A	1E8H-1E9H	R	2	0.01kWh	Uint32	
222	Section II outlet 14 active energy B	1EAH-1EBH	R	2	0.01kWh	Uint32	
223	Section II outlet 15 active energy C	1ECH-1EDH	R	2	0.01kWh	Uint32	
224	Section II outlet 16 active energy A	1EEH-1EFH	R	2	0.01kWh	Uint32	
225	Section II outlet 17 active energy B	1F0H-1F1H	R	2	0.01kWh	Uint32	
226	Section II outlet 18 active energy C	1F2H-1F3H	R	2	0.01kWh	Uint32	
227	Section II outlet 19 active energy A	1F4H-1F5H	R	2	0.01kWh	Uint32	
228	Section II outlet 20 active energy B	1F6H-1F7H	R	2	0.01kWh	Uint32	
229	Section II outlet 21 active energy C	1F8H-1F9H	R	2	0.01kWh	Uint32	
230	Section II outlet 22 active energy A	1FAH-1FBH	R	2	0.01kWh	Uint32	
231	Section II outlet 23 active energy B	1FCH-1FDH	R	2	0.01kWh	Uint32	
232	Section II outlet 24 active energy C	1FEH-1FFH	R	2	0.01kWh	Uint32	
233	Section I outlet 1 reactive energy A	200H-201H	R	2	0.01kvarh	Uint32	
234	Section I outlet 2 reactive energy B	202H-203H	R	2	0.01kvarh	Uint32	
235	Section I outlet 3 reactive energy C	204H-205H	R	2	0.01kvarh	Uint32	
236	Section I outlet 4 reactive energy A	206H-207H	R	2	0.01kvarh	Uint32	
237	Section I outlet 5 reactive energy B	208H-209H	R	2	0.01kvarh	Uint32	
238	Section I outlet 6 reactive energy C	20AH-20BH	R	2	0.01kvarh	Uint32	

239	Section I outlet 7 reactive energy A	20CH-20DH	R	2	0.01kvarh	Uint32	
240	Section I outlet 8 reactive energy B	20EH-20FH	R	2	0.01kvarh	Uint32	
241	Section I outlet 9 reactive energy C	210H-211H	R	2	0.01kvarh	Uint32	
242	Section I outlet 10 reactive energy A	212H-213H	R	2	0.01kvarh	Uint32	
243	Section I outlet 11 reactive energy B	214H-215H	R	2	0.01kvarh	Uint32	
244	Section I outlet 12 reactive energy C	216H-217H	R	2	0.01kvarh	Uint32	
245	Section II outlet 13 reactive energy A	218H-219H	R	2	0.01kvarh	Uint32	
246	Section II outlet 14 reactive energy B	21AH-21BH	R	2	0.01kvarh	Uint32	
247	Section II outlet 15 reactive energy C	21CH-21DH	R	2	0.01kvarh	Uint32	
248	Section II outlet 16 reactive energy A	21EH-21FH	R	2	0.01kvarh	Uint32	
249	Section II outlet 17 reactive energy B	220H-221H	R	2	0.01kvarh	Uint32	
250	Section II outlet 18 reactive energy C	222H-223H	R	2	0.01kvarh	Uint32	
251	Section II outlet 19 reactive energy A	224H-225H	R	2	0.01kvarh	Uint32	
252	Section II outlet 20 reactive energy B	226H-227H	R	2	0.01kvarh	Uint32	
253	Section II outlet 21 reactive energy C	228H-229H	R	2	0.01kvarh	Uint32	
254	Section II outlet 22 reactive energy A	22AH-22BH	R	2	0.01kvarh	Uint32	
255	Section II outlet 23 reactive energy B	22CH-22DH	R	2	0.01kvarh	Uint32	
256	Section II outlet 24 reactive energy C	22EH-22FH	R	2	0.01kvarh	Uint32	
257	I outlet 123 active energy ABC	230H-231H	R	2	0.01kWh	Uint32	
258	I outlet 456 active energy ABC	232H-233H	R	2	0.01kWh	Uint32	
259	I outlet 789 active energy ABC	234H-235H	R	2	0.01kWh	Uint32	
260	I outlet 10,11,12 active energy ABC	236H-237H	R	2	0.01kWh	Uint32	
261	II outlet 13,14,15 active energy ABC	238H-239H	R	2	0.01kWh	Uint32	
262	II outlet 16,17,18 active energy ABC	23AH-23BH	R	2	0.01kWh	Uint32	
263	II outlet 19,20,21 active energy ABC	23CH-23DH	R	2	0.01kWh	Uint32	
264	II outlet 22,23,24 active energy ABC	23EH-23FH	R	2	0.01kWh	Uint32	
265	I outlet 1,2,3 reactive energy ABC	240H-241H	R	2	0.01kvarh	Uint32	
266	I outlet 4,5,6 reactive energy ABC	242H-243H	R	2	0.01kvarh	Uint32	
267	I outlet 7,8,9 reactive energy ABC	244H-245H	R	2	0.01kvarh	Uint32	
268	I outlet 10,11,12 reactive energy ABC	246H-247H	R	2	0.01kvarh	Uint32	

269	II outlet 13,14,16 reactive energy ABC	248H-249H	R	2	0.01kvarh	Uint32	
270	II outlet 16,17,18 reactive energy ABC	24AH-24BH	R	2	0.01kvarh	Uint32	
271	II outlet 19,20,21 reactive energy ABC	24CH-24DH	R	2	0.01kvarh	Uint32	
272	II outlet 22,23,24 reactive energy ABC	24EH-24FH	R	2	0.01kvarh	Uint32	
273	Total harmonic content of phase A current (outgoing line 1)	30AH	R	1	0.01%	Uint16	
274	Phase A current harmonic 2-31 harmonic content (outgoing line 1)	30BH-328H	R	1	0.01%	Uint16	
275	Total harmonic content of phase B current (outgoing line 1)	329H	R	1	0.01%	Uint16	
276	Phase B current harmonic 2-31 harmonic content (outgoing line 1)	32AH-347H	R	1	0.01%	Uint16	
277	Total harmonic content of phase C current (outgoing line 1)	348H	R	1	0.01%	Uint16	
278	Phase C current harmonic 2-31 harmonic content (outgoing line 1)	349H-366H	R	1	0.01%	Uint16	
279	Total harmonic content of phase A current (outgoing line 2)	367H	R	1	0.01%	Uint16	
280	Phase A current harmonic 2-31 harmonic content (outgoing line 2)	368H-385H	R	1	0.01%	Uint16	
281	Total harmonic content of phase B current (outgoing line 2)	386H	R	1	0.01%	Uint16	
282	Phase B current harmonic 2-31 harmonic content (outgoing line 2)	387H-3A4H	R	1	0.01%	Uint16	
283	Total harmonic content of phase C current (outgoing line 2)	3A5H	R	1	0.01%	Uint16	
284	Phase C current harmonic 2-31 harmonic content (outgoing line 2)	3A6H-3C3H	R	1	0.01%	Uint16	
285	Total harmonic content of phase A current (outlet 3)	3C4H	R	1	0.01%	Uint16	
286	Phase A current harmonic 2-31 harmonic content (outgoing line 3)	3C5H-3E2H	R	1	0.01%	Uint16	
287	Total harmonic content of phase B current (outlet 3)	3E3H	R	1	0.01%	Uint16	
288	Phase B current harmonic 2-31 harmonic content (outgoing line 3)	3E4H-401H	R	1	0.01%	Uint16	
289	Total harmonic content of phase C current (outlet 3)	402H	R	1	0.01%	Uint16	
290	Phase C current harmonic 2-31 harmonic content (outgoing line 3)	403H-420H	R	1	0.01%	Uint16	
291	Total harmonic content of phase A current (outgoing line 1)	421H	R	1	0.01%	Uint16	
292	Phase A current harmonic 2-31 harmonic content (outgoing line 1)	422H-43FH	R	1	0.01%	Uint16	
293	Total harmonic content of phase B current (outgoing line 4)	440H	R	1	0.01%	Uint16	
294	Phase B current harmonic 2-31 harmonic content (outgoing line 4)	441H-45EH	R	1	0.01%	Uint16	
295	Total harmonic content of phase C current (outgoing line 4)	45FH	R	1	0.01%	Uint16	
296	Phase C current harmonic 2-31 harmonic content (outgoing 4)	460H-47DH	R	1	0.01%	Uint16	
297	Total harmonic content of phase A current (outgoing line 5)	47EH	R	1	0.01%	Uint16	
298	Phase A current harmonic 2-31	47FH-49CH	R	1	0.01%		

	harmonic content (outgoing line 5)					Uint16	
299	Total harmonic content of phase B current (outgoing line 5)	49DH	R	1	0.01%	Uint16	
300	Phase B current harmonic 2-31 harmonic content (outgoing line 5)	49EH-4BBH	R	1	0.01%	Uint16	
301	Total harmonic content of phase C current (outgoing line 5)	4BCH	R	1	0.01%	Uint16	
302	Phase C current harmonic 2-31 harmonic content (outgoing line 5)	4BDH=4DA H	R	1	0.01%	Uint16	
303	Total harmonic content of phase A current (outlet 6)	4DBH	R	1	0.01%	Uint16	
304	Phase A current harmonic 2-31 harmonic content (outgoing line 6)	4DCH-4F9H	R	1	0.01%	Uint16	
305	Total harmonic content of phase B current (outlet 6)	4FAH	R	1	0.01%	Uint16	
306	Phase B current harmonic 2-31 harmonic content (outlet 6)	4FBH-518H	R	1	0.01%	Uint16	
307	Total harmonic content of phase C current (outlet 6)	519H	R	1	0.01%	Uint16	
308	Phase C current harmonic 2-31 harmonic content (outlet 6)	51AH-537H	R	1	0.01%	Uint16	
309	Total harmonic content of phase A current (outlet 7)	538H	R	1	0.01%	Uint16	
310	Phase A current harmonic 2-31 harmonic content (outgoing line 7)	539H-556H	R	1	0.01%	Uint16	
311	Total harmonic content of phase B current (outlet 7)	557H	R	1	0.01%	Uint16	
312	Phase B current harmonic 2-31 harmonic content (outgoing line 7)	558H-575H	R	1	0.01%	Uint16	
313	Total harmonic content of phase C current (outgoing line 7)	576H	R	1	0.01%	Uint16	
314	Phase C current harmonic 2-31 harmonic content (outlet 7)	577H-594H	R	1	0.01%	Uint16	
315	Total harmonic content of phase A current (outgoing line 8)	595H	R	1	0.01%	Uint16	
316	Phase A current harmonic 2-31 harmonic content (outgoing line 8)	596H-5B3H	R	1	0.01%	Uint16	
317	Total harmonic content of phase B current (outgoing line 8)	5B4H	R	1	0.01%	Uint16	
318	Phase B current harmonic 2-31 harmonic content (outgoing line 8)	5B5H-5D2H	R	1	0.01%	Uint16	
319	Total harmonic content of phase C current (outgoing line 8)	5D3H	R	1	0.01%	Uint16	
320	Phase C current harmonic 2-31 harmonic content (outgoing line 8)	5D4H-5F1H	R	1	0.01%	Uint16	
321	Total harmonic content of section I current (outgoing line 1-outgoing line 12) A-B-C	602H-60DH	R	1	0.01%	Uint16	
322	Total harmonic content of section I current (outgoing line 1-outgoing line 12) A-B-C	60EH-619H	R	1	0.01%	Uint16	

6.4.3 AMC16Z-FAK24

When AMC16Z-FAK24 / 48 communicates, two addresses will be occupied in the same bus. If the address in the table is 1, then address 2 is occupied. The other table addresses in the same bus cannot be set to 2, and the rest can be deduced by analogy.

Telemetry, remote control

Parameter area(0x00～0x2F)

NO.	variable	address	Read / write	Word length	unit	type of data	Remarks
1	address	00H	R/W	1	NONE	Uint16	1～247
2	Baud rate	01H	R/W	1	NONE	Uint16	0:115200,1:2400,2:4800, 3:9600,4:19200,5:38400, 6:57600,7:115200
3	Check Digit	02H	R/W	1	NONE	Uint16	0 :No check 1 :odd parity 2 :Even parity
4	Wiring	03H	R/W	1	NONE	Uint16	0 :Three-phase four-wire 1 :three-phase three-wire
5	Rated voltage	04H	R/W	1	V	Uint16	57,100,220,380
6	Rated current	05H	R/W	1	A	Uint16	50,100,200
7	Voltage ratio	06H	R/W	1	NONE	Uint16	1～9999
8	1 Incoming current ratio	07H	R/W	1	NONE	Uint16	1～9999
9	2 Incoming current ratio	08H	R/W	1	NONE	Uint16	1～9999
10	Reserve	09H	R/W	1	NONE	Uint16	
11	Reserve	0AH	R/W	1	NONE	Uint16	
12	Reserve	0BH	R/W	1	NONE	Uint16	
13	Reserve	0CH	R/W	1	NONE	Uint16	
14	Electrical energy clearing	0DH	R/W	1	NONE	Uint16	Write with 10H command 0x6601 Clear the first road 0x6602 Clear the second road The rest is the same 0x66ffall clear
15	Debounce times	27H	R/W	1	NONE	Uint16	Default 2
16	High level judgment value	28H	R/W	1	NONE	Uint16	30,66,100

Electrical parameter data area(0x30～0x619)

NO.	variable	address	Read / write	Word length	unit	type of data	Remarks
1	I outlet 1 phase voltage A	30H-31H	R	2	V	float	
2	I outlet 2phase voltage B	32H-33H	R	2	V	float	
3	I outlet 3phase voltage C	34H-35H	R	2	V	float	
4	I outlet 4phase voltage A	36H-37H	R	2	V	float	
5	I outlet 5phase voltage B	38H-39H	R	2	V	float	
6	I outlet 6phase voltage C	3AH-3BH	R	2	V	float	

7	I outlet 7 phase voltage A	3CH-3DH	R	2	V	float	
8	I outlet 8 phase voltage B	3EH-3FH	R	2	V	float	
9	I outlet 9 phase voltage C	40H-41H	R	2	V	float	
10	I outlet 10 phase voltage A	42H-43H	R	2	V	float	
11	I outlet 11phase voltage B	44H-45H	R	2	V	float	
12	I outlet 12 phase voltage C	46H-47H	R	2	V	float	
13	II outlet 1 phase voltage A	48H-49H	R	2	V	float	
14	II outlet 2 phase voltage B	4AH-4BH	R	2	V	float	
15	II outlet 3 phase voltage C	4CH-4DH	R	2	V	float	
16	II outlet 4 phase voltage A	4EH-4FH	R	2	V	float	
17	II outlet 5 phase voltage B	50H-51H	R	2	V	float	
18	II outlet 6 phase voltage C	52H-53H	R	2	V	float	
19	II outlet 7 phase voltage A	54H-55H	R	2	V	float	
20	II outlet 8 phase voltage B	56H-57H	R	2	V	float	
21	II outlet 9 phase voltage C	58H-59H	R	2	V	float	
22	II outlet 10 phase voltage A	5AH-5BH	R	2	V	float	
23	II outlet 11 phase voltage B	5CH-5DH	R	2	V	float	
24	II outlet phase 12 voltage C	5EH-5FH	R	2	V	float	
25	I outlet 1 line voltage A	60H-61H	R	2	V	float	
26	I outlet 2 line voltage B	62H-63H	R	2	V	float	
27	I outlet 3 line voltage C	64H-65H	R	2	V	float	
28	I outlet 4 line voltage A	66H-67H	R	2	V	float	
29	I outlet 5 line voltage B	68H-69H	R	2	V	float	
30	I outlet 6 line voltage C	6AH-6BH	R	2	V	float	
31	I outlet 7 line voltage A	6CH-6DH	R	2	V	float	
32	I outlet 8 line voltage B	6EH-6FH	R	2	V	float	
33	I outlet 9 line voltage C	70H-71H	R	2	V	float	
34	I outlet 10 line voltage A	72H-73H	R	2	V	float	
35	I outlet 11 line voltage B	74H-75H	R	2	V	float	
	I outlet 12 line voltage C						

36		76H-77H	R	2	V	float	
37	II outlet 1 line voltage A	78H-79H	R	2	V	float	
38	II outlet 2 line voltage B	7AH-7BH	R	2	V	float	
39	II outlet 3 line voltage C	7CH-7DH	R	2	V	float	
40	II outlet 4 line voltage A	7EH-7FH	R	2	V	float	
41	II outlet 5 line voltage B	80H-81H	R	2	V	float	
42	II outlet 6 line voltage C	82H-83H	R	2	V	float	
43	II outlet 7 line voltage A	84H-85H	R	2	V	float	
44	II outlet 8 line voltage B	86H-87H	R	2	V	float	
45	II outlet 9 line voltage C	88H-89H	R	2	V	float	
46	II outlet 10 line voltage A	8AH-8BH	R	2	V	float	
47	II outlet 11 line voltage B	8CH-8DH	R	2	V	float	
48	II outlet 12 line voltage C	8EH-8FH	R	2	V	float	
49	Section I outlet 1 current A	90H-91H	R	2	A	float	
50	Section I outlet 2 current B	92H-93H	R	2	A	float	
51	Section I outlet 3 current C	94H-95H	R	2	A	float	
52	Section I outlet 4 current A	96H-97H	R	2	A	float	
53	Section I outlet 5 current B	98H-99H	R	2	A	float	
54	Section I outlet 6 current C	9AH-9BH	R	2	A	float	
55	Section I outlet 7 current A	9CH-9DH	R	2	A	float	
56	Section I outlet 8 current B	9EH-9FH	R	2	A	float	
57	Section I outlet 9 current C	A0H-A1H	R	2	A	float	
58	Section I outlet 10 current A	A2H-A3H	R	2	A	float	
59	Section I outlet 11 current B	A4H-A5H	R	2	A	float	
60	Section I outlet 12 current C	A6H-A7H	R	2	A	float	
61	Section II outlet 1 current A	A8H-A9H	R	2	A	float	
62	Section II outlet 2 current B	AAH-ABH	R	2	A	float	
63	Section II outlet 3 current C	ACH-ADH	R	2	A	float	
64	Section II outlet 4 current A	AEH-AFH	R	2	A	float	
65	Section II outlet 5 current B	B0H-B1H	R	2	A	float	

66	Section II outlet 6 current C	B2H-B3H	R	2	A	float	
67	Section II outlet 7 current A	B4H-B5H	R	2	A	float	
68	Section II outlet 8 current B	B6H-B7H	R	2	A	float	
69	Section II outlet 9 current C	B8H-B9H	R	2	A	float	
70	Section II outlet 10 current A	BAH-BBH	R	2	A	float	
71	Section II outlet 11current B	BCH-BDH	R	2	A	float	
72	Section II outlet 12current C	BEH-BFH	R	2	A	float	
73	Section I outlet 1 active A	C0H-C1H	R	2	kW	float	
74	Section I outlet 2 active B	C2H-C3H	R	2	kW	float	
75	Section I outlet 3 active C	C4H-C5H	R	2	kW	float	
76	Section I outlet 4 active A	C6H-C7H	R	2	kW	float	
77	Section I outlet 5 active B	C8H-C9H	R	2	kW	float	
78	Section I outlet 6 active C	CAH-CBH	R	2	kW	float	
79	Section I outlet 7 active A	CCH-CDH	R	2	kW	float	
80	Section I outlet 8 active B	CEH-CFH	R	2	kW	float	
81	Section I outlet 9 active C	D0H-D1H	R	2	kW	float	
82	Section I outlet 10 active A	D2H-D3H	R	2	kW	float	
83	Section I outlet 11 active B	D4H-D5H	R	2	kW	float	
84	Section I outlet 12 active C	D6H-D7H	R	2	kW	float	
85	Section II outlet 1 active A	D8H-D9H	R	2	kW	float	
86	Section II outlet 2 active B	DAH-DBH	R	2	kW	float	
87	Section II outlet 3 active C	DCH-DDH	R	2	kW	float	
88	Section II outlet 4 active A	DEH-DFH	R	2	kW	float	
89	Section II outlet 5 active B	E0H-E1H	R	2	kW	float	
90	Section II outlet 6 active C	E2H-E3H	R	2	kW	float	
91	Section II Outlet 7 Active A	E4H-E5H	R	2	kW	float	
92	Section II outlet 8 active B	E6H-E7H	R	2	kW	float	
93	Section II outlet 9 active C	E8H-E9H	R	2	kW	float	
94	Section II outlet 10 active A	EAH-EBH	R	2	kW	float	
	Section II outlet 11 active B						

95		ECH-EDH	R	2	kW	float	
96	Section II outlet 12 active C	EEH-EFH	R	2	kW	float	
97	Section I outlet 1 reactive A	F0H-F1H	R	2	kvar	float	
98	Section I outlet 2 reactive B	F2H-F3H	R	2	kvar	float	
99	Section I outlet 3 reactive C	F4H-F5H	R	2	kvar	float	
100	Section I outlet 4 reactive A	F6H-F7H	R	2	kvar	float	
101	Section I outlet 5 reactive B	F8H-F9H	R	2	kvar	float	
102	Section I outlet 6 reactive C	FAH-FBH	R	2	kvar	float	
103	Section I outlet 7 reactive A	FCH-FDH	R	2	kvar	float	
104	Section I outlet 8 reactive B	FEH-FFH	R	2	kvar	float	
105	Section I outlet 9 reactive C	100H-101H	R	2	kvar	float	
106	Section I outlet 10 reactive A	102H-103H	R	2	kvar	float	
107	Section I outlet 11 reactive B	104H-105H	R	2	kvar	float	
108	Section I outlet 12 reactive C	106H-107H	R	2	kvar	float	
109	Section II outlet 1 reactive A	108H-109H	R	2	kvar	float	
110	Section II outlet 2 reactive B	10AH-10BH	R	2	kvar	float	
111	Section II outlet 3 reactive C	10CH-10DH	R	2	kvar	float	
112	Section II outlet 4 reactive A	10EH-10FH	R	2	kvar	float	
113	Section II outlet 5 reactive B	110H-111H	R	2	kvar	float	
114	Section II outlet 6 reactive C	112H-113H	R	2	kvar	float	
115	Section II outlet 7 reactive A	114H-115H	R	2	kvar	float	
116	Section II outlet 8 reactive B	116H-117H	R	2	kvar	float	
117	Section II outlet 9 reactive C	118H-119H	R	2	kvar	float	
118	Section II outlet 10 reactive A	11AH-11BH	R	2	kvar	float	
119	Section II outlet 11 reactive B	11CH-11DH	R	2	kvar	float	
120	Section II outlet 12 reactive C	11EH-11FH	R	2	kvar	float	
121	Section I outlet 1 apparent A	120H-121H	R	2	kVA	float	
122	Section I outlet 2apparent B	122H-123H	R	2	kVA	float	
123	Section I outlet 3apparent C	124H-125H	R	2	kVA	float	
124	Section I outlet 4 apparent A	126H-127H	R	2	kVA	float	

125	Section I outlet 5 apparent B	128H-129H	R	2	kVA	float	
126	Section I outlet 6 apparent C	12AH-12BH	R	2	kVA	float	
127	Section I outlet 7apparent A	12CH-12DH	R	2	kVA	float	
128	Section I outlet 8apparent B	12EH-12FH	R	2	kVA	float	
129	Section I outlet 9apparent C	130H-131H	R	2	kVA	float	
130	Section I outlet 10apparent A	132H-133H	R	2	kVA	float	
131	Section I outlet 11apparent B	134H-135H	R	2	kVA	float	
132	Section I outlet 12apparent C	136H-137H	R	2	kVA	float	
133	Section II outlet 1 apparent A	138H-139H	R	2	kVA	float	
134	Section II outlet 2apparent B	13AH-13BH	R	2	kVA	float	
135	Section II outlet 3pparent C	13CH-13DH	R	2	kVA	float	
136	Section II outlet 4apparent A	13EH-13FH	R	2	kVA	float	
137	Section II outlet 5apparent B	140H-141H	R	2	kVA	float	
138	Section II outlet 6apparent C	142H-143H	R	2	kVA	float	
139	Section II outlet 7apparent A	144H-145H	R	2	kVA	float	
140	Section II outlet 8apparent B	146H-147H	R	2	kVA	float	
141	Section II outlet 9apparent C	148H-149H	R	2	kVA	float	
142	Section II outlet 10 apparent A	14AH-14BH	R	2	kVA	float	
143	Section II outlet 11 apparent B	14CH-14DH	R	2	kVA	float	
144	Section II outlet 12 apparent C	14EH-14FH	R	2	kVA	float	
145	Section I outlet 1 factor A	150H-151H	R	2	NONE	float	
146	Section I outlet 2 factor B	152H-153H	R	2	NONE	float	
147	Section I outlet 3 factor C	154H-155H	R	2	NONE	float	
148	Section I outlet 4 factor A	156H-157H	R	2	NONE	float	
149	Section I outlet 5 factor B	158H-159H	R	2	NONE	float	
150	Section I outlet 6 factor C	15AH-15BH	R	2	NONE	float	
151	Section I outlet 7factor A	15CH-15DH	R	2	NONE	float	
152	Section I outlet 8factor B	15EH-15FH	R	2	NONE	float	
153	Section I outlet 9 factor C	160H-161H	R	2	NONE	float	
	Section I outlet 10 factor A						

154		162H-163H	R	2	NONE	float	
155	Section I outlet 11 factor B	164H-165H	R	2	NONE	float	
156	Section I outlet 12 factor C	166H-167H	R	2	NONE	float	
157	Section II outlet 1 factor A	168H-169H	R	2	NONE	float	
158	Section II outlet 2 factor B	16AH-16BH	R	2	NONE	float	
159	Section II outlet 3 factor C	16CH-16DH	R	2	NONE	float	
160	Section II outlet 4 factor A	16EH-16FH	R	2	NONE	float	
161	Section II outlet 5 factor B	170H-171H	R	2	NONE	float	
162	Section II outlet 6 factor C	172H-173H	R	2	NONE	float	
163	Section II outlet 7 factor A	174H-175H	R	2	NONE	float	
164	Section II outlet 8 factor B	176H-177H	R	2	NONE	float	
165	Section II outlet 9 factor C	178H-179H	R	2	NONE	float	
166	Section II outlet 10 factor A	17AH-17BH	R	2	NONE	float	
167	Section II outlet 11 factor B	17CH-17DH	R	2	NONE	float	
168	Section II outlet 12 factor C	17EH-17FH	R	2	NONE	float	
169	Section I outlet 123 frequency ABC	180H-181H	R	2	HZ	float	
170	Section I outlet 456 frequency ABC	182H-183H	R	2	HZ	float	
171	Section I outlet 789 frequency ABC	184H-185H	R	2	HZ	float	
172	Section I outlet 10, 11, 12 frequency ABC	186H-187H	R	2	HZ	float	
173	II outlet 123 frequency ABC	188H-189H	R	2	HZ	float	
174	II outlet 456 frequency ABC	18AH-18BH	R	2	HZ	float	
175	II outlet 789 frequency ABC	18CH-18DH	R	2	HZ	float	
176	Section II outgoing line 10, 11, 12frequency ABC	18EH-18FH	R	2	HZ	float	
177	Section I outgoing line 1, 2, 3 active ABC	190H-191H	R	2	kW	float	
178	Section I outgoing line 4, 5, 6 active ABC	192H-193H	R	2	kW	float	
179	Section I outgoing line 7, 8, 9 active ABC	194H-195H	R	2	kW	float	
180	Section I outgoing line 10, 11, 12active ABC	196H-197H	R	2	kW	float	
181	Section II outgoing line 1, 2, 3 active	198H-199H	R	2	kW	float	
182	Outlet 4, 5,6 active ABC in Section II	19AH-19BH	R	2	kW	float	
183	Section II outgoing line 7, 8, 9 active ABC	19CH-19DH	R	2	kW	float	

184	outgoing line10,11,12 active ABC in Section II	19EH-19FH	R	2	kW	float	
185	Section I outlet 1,2,3 reactive ABC	1A0H-1A1H	R	2	kvar	float	
186	Section I outlet 4,5,6reactive ABC	1A2H-1A3H	R	2	kvar	float	
187	Section I outlet 7,8,9reactive ABC	1A4H-1A5H	R	2	kvar	float	
188	Section I outlet 10,11,12 reactive ABC	1A6H-1A7H	R	2	kvar	float	
189	Section II outlet 1,2,3 reactive ABC	1A8H-1A9H	R	2	kvar	float	
190	Section II outlet 4,5,6 reactive ABC	1AAH-1ABH	R	2	kvar	float	
191	Section II outlet 7,8,9 reactive ABC	1ACH-1ADH	R	2	kvar	float	
192	Section II outlet 10,11,12 reactive ABC	1AEH-1AFH	R	2	kvar	float	
193	Section I outlet 1,2,3 apparent ABC	1B0H-1B1H	R	2	kVA	float	
194	Section I outlet 4,5,6apparent ABC	1B2H-1B3H	R	2	kVA	float	
195	Section I outlet 7,8,9 apparent ABC	1B4H-1B5H	R	2	kVA	float	
196	Section I outlet 10,11,12 apparent ABC	1B6H-1B7H	R	2	kVA	float	
197	Section II outlet 1,2,3apparent ABC	1B8H-1B9H	R	2	kVA	float	
198	Section II outlet4,5,6 apparent ABC	1BAH-1BBH	R	2	kVA	float	
199	Section II outlet 7,8,9 apparent ABC	1BCH-1BDH	R	2	kVA	float	
200	Section II outlet 10,11,12 apparent ABC	1BEH-1BFH	R	2	kVA	float	
201	Section I outlet 1,2,3 factor ABC	1C0H-1C1H	R	2	NONE	float	
202	Section I outlet 4,5,6 factor ABC	1C2H-1C3H	R	2	NONE	float	
203	Section I outlet 7,8,9 factor ABC	1C4H-1C5H	R	2	NONE	float	
204	Section I outlet 10,11,12 factor ABC	1C6H-1C7H	R	2	NONE	float	
205	Section II outlet 1,2,3 factor ABC	1C8H-1C9H	R	2	NONE	float	
206	Section II outlet 4,5,6 factor ABC	1CAH-1CBH	R	2	NONE	float	
207	Section II outlet 7,8,9 factor ABC	1CCH-1CDH	R	2	NONE	float	
208	Section II outlet 10,11,12 factor ABC	1CEH-1CFH	R	2	NONE	float	
209	Section I outlet 1 active energy A	1D0H-1D1H	R	2	0.01kWh	Uint32	
210	Section I outlet 2 active energy B	1D2H-1D3H	R	2	0.01kWh	Uint32	
211	Section I outlet 3 active energy C	1D4H-1D5H	R	2	0.01kWh	Uint32	
212	Section I outlet 4 active energy A	1D6H-1D7H	R	2	0.01kWh	Uint32	
	Section I outlet 5 active energy B				0.01kWh		

213		1D8H-1D9H	R	2		Uint32	
214	Section I outlet 6 active energy C	1DAH-1DB H	R	2	0.01kWh	Uint32	
215	Section I outlet 7 active energy A	1DCH-1DDH	R	2	0.01kWh	Uint32	
216	Section I outlet 8 active energy B	1DEH-1DFH	R	2	0.01kWh	Uint32	
217	Section I outlet 9 active energy C	1E0H-1E1H	R	2	0.01kWh	Uint32	
218	Section I outlet 10 active energy A	1E2H-1E3H	R	2	0.01kWh	Uint32	
219	Section I outlet 11 active energy B	1E4H-1E5H	R	2	0.01kWh	Uint32	
220	Section I outlet 12 active energy C	1E6H-1E7H	R	2	0.01kWh	Uint32	
221	Section II outlet 1 active energy A	1E8H-1E9H	R	2	0.01kWh	Uint32	
222	Section II outlet 2 active energy B	1EAH-1EBH	R	2	0.01kWh	Uint32	
223	Section II outlet 3 active energy C	1ECH-1EDH	R	2	0.01kWh	Uint32	
224	Section II outlet 4 active energy A	1EEH-1EFH	R	2	0.01kWh	Uint32	
225	Section II outlet 5 active energy B	1F0H-1F1H	R	2	0.01kWh	Uint32	
226	Section II outlet 6 active energy C	1F2H-1F3H	R	2	0.01kWh	Uint32	
227	Section II outlet 7 active energy A	1F4H-1F5H	R	2	0.01kWh	Uint32	
228	Section II outlet 8 active energy B	1F6H-1F7H	R	2	0.01kWh	Uint32	
229	Section II outlet 9 active energy C	1F8H-1F9H	R	2	0.01kWh	Uint32	
230	Section II outlet 10 active energy A	1FAH-1FBH	R	2	0.01kWh	Uint32	
231	Section II outlet 11 active energy B	1FCH-1FDH	R	2	0.01kWh	Uint32	
232	Section II outlet 12 active energy C	1FEH-1FFH	R	2	0.01kWh	Uint32	
233	Section I outlet 1 reactive energy A	200H-201H	R	2	0.01kvarh	Uint32	
234	Section I outlet 2 reactive energy B	202H-203H	R	2	0.01kvarh	Uint32	
235	Section I outlet 3 reactive energy C	204H-205H	R	2	0.01kvarh	Uint32	
236	Section I outlet 4 reactive energy A	206H-207H	R	2	0.01kvarh	Uint32	
237	Section I outlet 5 reactive energy B	208H-209H	R	2	0.01kvarh	Uint32	
238	Section I outlet 6 reactive energy C	20AH-20BH	R	2	0.01kvarh	Uint32	
239	Section I outlet 7 reactive energy A	20CH-20DH	R	2	0.01kvarh	Uint32	
240	Section I outlet 8 reactive energy B	20EH-20FH	R	2	0.01kvarh	Uint32	
241	Section I outlet 9 reactive energy C	210H-211H	R	2	0.01kvarh	Uint32	
242	Section I outlet 10 reactive energy A	212H-213H	R	2	0.01kvarh	Uint32	

243	Section I outlet 11 reactive energy B	214H-215H	R	2	0.01kvarh	Uint32	
244	Section I outlet 12 reactive energy C	216H-217H	R	2	0.01kvarh	Uint32	
245	Section I outlet 1 reactive energy A	218H-219H	R	2	0.01kvarh	Uint32	
246	Section II outlet 2 reactive energy B	21AH-21BH	R	2	0.01kvarh	Uint32	
247	Section II outlet 3 reactive energy C	21CH-21DH	R	2	0.01kvarh	Uint32	
248	Section II outlet 4 reactive energy A	21EH-21FH	R	2	0.01kvarh	Uint32	
249	Section II outlet 5 reactive energy B	220H-221H	R	2	0.01kvarh	Uint32	
250	Section II outlet 6 reactive energy C	222H-223H	R	2	0.01kvarh	Uint32	
251	Section II outlet 7 reactive energy A	224H-225H	R	2	0.01kvarh	Uint32	
252	Section II outlet 8 reactive energy B	226H-227H	R	2	0.01kvarh	Uint32	
253	Section II outlet 9 reactive energy C	228H-229H	R	2	0.01kvarh	Uint32	
254	Section II outlet 10 reactive energy A	22AH-22BH	R	2	0.01kvarh	Uint32	
255	Section II outlet 11 reactive energy B	22CH-22DH	R	2	0.01kvarh	Uint32	
256	Section II outlet 12 reactive energy C	22EH-22FH	R	2	0.01kvarh	Uint32	
257	Section I outlet 123 active energy ABC	230H-231H	R	2	0.01kWh	Uint32	
258	Section I outlet 456 active energy ABC	232H-233H	R	2	0.01kWh	Uint32	
259	Section I outlet 789 active energy ABC	234H-235H	R	2	0.01kWh	Uint32	
260	Section I outlet 10, 11, 12 active energy ABC	236H-237H	R	2	0.01kWh	Uint32	
261	Section II outlet 123 active energy ABC	238H-239H	R	2	0.01kWh	Uint32	
262	Section II outlet 456 active energy ABC	23AH-23BH	R	2	0.01kWh	Uint32	
263	Section II outlet 789 active energy ABC	23CH-23DH	R	2	0.01kWh	Uint32	
264	Section II outlet 10, 11, 12 active energy ABC	23EH-23FH	R	2	0.01kWh	Uint32	
265	Section I outlet 1, 2, 3 reactive energy ABC	240H-241H	R	2	0.01kvarh	Uint32	
266	Section I outlet 4, 5, 6 reactive energy ABC	242H-243H	R	2	0.01kvarh	Uint32	
267	Reactive energy ABC of section I, outlet 7, 8, 9	244H-245H	R	2	0.01kvarh	Uint32	
268	Reactive energy ABC of section I, outlet10,11,12	246H-247H	R	2	0.01kvarh	Uint32	
269	reactive energy ABC of section II Outline 1,2,3	248H-249H	R	2	0.01kvarh	Uint32	
270	reactive energy ABC of section II Outline 4,5,6	24AH-24BH	R	2	0.01kvarh	Uint32	
271	reactive energy ABC of section II Outline 7,8,9	24CH-24DH	R	2	0.01kvarh	Uint32	
272	reactive energy ABC of section II Outline			2			

	10,11,12	24EH-24FH	R		0.01kvarh	Uint32	
273	Total harmonic content of phase A current (outline 1 of section I)	30AH	R	1	0.01%	Uint16	
274	Phase A current harmonic 2-31 harmonic content (I section outlet 1)	30BH-328H	R	1	0.01%	Uint16	
275	Total harmonic content of phase B(I section outlet 2)	329H	R	1	0.01%	Uint16	
276	Phase B current harmonic 2-31 harmonic content (I section outlet 2)	32AH-347H	R	1	0.01%	Uint16	
277	Total harmonic content of phase C current (outline 3 of section I)	348H	R	1	0.01%	Uint16	
278	Phase C current harmonic 2-31 harmonic content (Section I outlet 3)	349H-366H	R	1	0.01%	Uint16	
279	Total harmonic content of phase A current (outline 4 of section I)	367H	R	1	0.01%	Uint16	
280	Phase A current harmonic 2-31 harmonic content (Section I outlet 4)	368H-385H	R	1	0.01%	Uint16	
281	Total harmonic content of phase B current (outline 5 of section I)	386H	R	1	0.01%	Uint16	
282	Phase B current harmonic 2-31 harmonic content (Section I outlet 5)	387H-3A4H	R	1	0.01%	Uint16	
283	Total harmonic content of phase C current (outline 6 of section I)	3A5H	R	1	0.01%	Uint16	
284	Phase C current harmonic 2-31 harmonic content (Section I outlet 6)	3A6H-3C3H	R	1	0.01%	Uint16	
285	Total harmonic content of phase A current (Section I outlet 7)	3C4H	R	1	0.01%	Uint16	
286	Phase A current harmonic 2-31 harmonic content (Section I outlet 7)	3C5H-3E2H	R	1	0.01%	Uint16	
287	Total harmonic content of phase B current (Section I outlet 8)	3E3H	R	1	0.01%	Uint16	
288	Phase B current harmonics 2-31 harmonic content (Segment I outlet 8)	3E4H-401H	R	1	0.01%	Uint16	
289	Total harmonic content of phase C current (outline 9 of section I)	402H	R	1	0.01%	Uint16	
290	Phase C current harmonic 2-31 harmonic content (Section I outlet 9)	403H-420H	R	1	0.01%	Uint16	
291	Total harmonic content of phase A current (Section I outlet 10)	421H	R	1	0.01%	Uint16	
292	Phase A current harmonic 2-31 harmonic content (Section I outlet 10)	422H-43FH	R	1	0.01%	Uint16	
293	Total harmonic content of phase B current (Section I outlet 11)	440H	R	1	0.01%	Uint16	
294	Phase B current harmonic 2-31 harmonic content (Section I outlet 11)	441H-45EH	R	1	0.01%	Uint16	
295	Total harmonic content of phase C current (outline 12 of section I)	45FH	R	1	0.01%	Uint16	
296	Phase C current harmonic 2-31 harmonic content (Section I outlet 12)	460H-47DH	R	1	0.01%	Uint16	
297	Total harmonic content of phase A current (outline 1 of section II)	47EH	R	1	0.01%	Uint16	
298	Phase A current harmonic 2-31 harmonic content (Section II outlet 1)	47FH-49CH	R	1	0.01%	Uint16	
299	Total harmonic content of phase B current (outline 2 of section II)	49DH	R	1	0.01%	Uint16	
300	Phase B current harmonic 2-31 order harmonic content (Section II outlet 2)	49EH-4BBH	R	1	0.01%	Uint16	

301	Total harmonic content of phase C current (outline 3 of section II)	4BCH	R	1	0.01%	Uint16	
302	Phase C current harmonic 2-31 harmonic content (Section II outlet 3)	4BDH=4DAH	R	1	0.01%	Uint16	
303	Total harmonic content of phase A current (outline 4 of section II)	4DBH	R	1	0.01%	Uint16	
304	Phase A current harmonic 2-31 harmonic content (Section II outlet 4)	4DCH-4F9H	R	1	0.01%	Uint16	
305	Total harmonic content of phase B current (Section II exit 5)	4FAH	R	1	0.01%	Uint16	
306	Phase B current harmonic 2-31 harmonic content (Section II outlet 5)	4FBH-518H	R	1	0.01%	Uint16	
307	Total harmonic content of phase C current (outline 6 of section II)	519H	R	1	0.01%	Uint16	
308	Phase C current harmonic 2-31 harmonic content (Section II outlet 6)	51AH-537H	R	1	0.01%	Uint16	
309	Total harmonic content of phase A current (outline 7 of section II)	538H	R	1	0.01%	Uint16	
310	Phase A current harmonic 2-31 harmonic content (Section II outlet 7)	539H-556H	R	1	0.01%	Uint16	
311	Total harmonic content of phase B current (Section II outlet 8)	557H	R	1	0.01%	Uint16	
312	Phase B current harmonic 2-31 harmonic content (Section II outlet 8)	558H-575H	R	1	0.01%	Uint16	
313	Total harmonic content of phase C current (outline 9 of section II)	576H	R	1	0.01%	Uint16	
314	Phase C current harmonic 2-31 harmonic content (Section II outlet 9)	577H-594H	R	1	0.01%	Uint16	
315	Total harmonic content of phase A current (Section II outlet 10)	595H	R	1	0.01%	Uint16	
316	Phase A current harmonic 2-31 harmonic content (Section II outlet 10)	596H-5B3H	R	1	0.01%	Uint16	
317	Total harmonic content of phase B current (outline 11 of section II)	5B4H	R	1	0.01%	Uint16	
318	Phase B current harmonic 2-31 harmonic content (outline 11 in section II)	5B5H-5D2H	R	1	0.01%	Uint16	
319	Total harmonic content of phase C current (outline 12 of section II)	5D3H	R	1	0.01%	Uint16	
320	Phase C current harmonic 2-31 harmonic content (Section II outlet 12)	5D4H-5F1H	R	1	0.01%	Uint16	
321	Total harmonic content of section I current (outgoing line 1-outgoing line 12) A-B-C	602H-60DH	R	1	0.01%	Uint16	
322	Total harmonic content of section II current (outgoing wire 1-outgoing wire 12) A-B-C	60EH-619H	R	1	0.01%	Uint16	

Remote signalling

NO.	variable	address	Read / write	Remarks
1	1st switch input	0	R	0 is invalid, 1 is valid
2	2nd switch input	1	R	Same as above
3	3rd switch input	2	R	Same as above
4	4th switch input	3	R	Same as above

5	5th switch input	4	R	Same as above
6	6th switch input	5	R	Same as above
7	7th switch input	6	R	Same as above
8	8th switch input	7	R	Same as above
9	9th switch input	8	R	Same as above
10	10th switch input	9	R	Same as above
11	11st switch input	10	R	Same as above
12	12nd switch input	11	R	Same as above
13	13rd switch input	12	R	Same as above
14	14th switch input	13	R	Same as above
15	15th switch input	14	R	Same as above
16	16th switch input	15	R	Same as above
17	17th switch input	16	R	Same as above
18	18th switch input	17	R	Same as above
19	19th switch input	18	R	Same as above
20	20th switch input	19	R	Same as above
21	21st switch input	20	R	Same as above
22	22nd switch input	21	R	Same as above
23	23rd switch input	22	R	Same as above
24	24th switch input	23	R	Same as above
25	25th switch input	24	R	Same as above
26	26th switch input	25	R	Same as above
27	27th switch input	26	R	Same as above
28	28th switch input	27	R	Same as above
29	29th switch input	28	R	Same as above
30	30th switch input	29	R	Same as above
31	31st switch input	30	R	Same as above
32	32nd switch input	31	R	Same as above
33	33rd switch input	32	R	Same as above
	34th switch input			

34		33	R	Same as above
35	35th switch input	34	R	Same as above
36	36th switch input	35	R	Same as above
37	37th switch input	36	R	Same as above
38	38th switch input	37	R	Same as above
39	39th switch input	38	R	Same as above
40	40th switch input	39	R	Same as above
41	41st switch input	40	R	Same as above
42	42nd switch input	41	R	Same as above
43	43rd switch input	42	R	Same as above
44	44th switch input	43	R	Same as above
45	45th switch input	44	R	Same as above
46	46th switch input	45	R	Same as above
47	47th switch input	46	R	Same as above
48	48th switch input	47	R	Same as above

6.4.4 AMC16Z-FAK48

When AMC16Z-FAK24/48 communicates, two addresses will be occupied in the same bus. If the address in the table is 1, then address 2 will be occupied. The addresses of other tables in the same bus cannot be set to 2, and the rest of the addresses will be similar.

Telemetry, remote control

Parameter section(0x00～0x2F)

Serial NO.	Variate	ADD	Read/ write	Byte length	Unit	Data type	Remark
1	ADD	00H	R/W	1	NONE	Uint16	1～247
2	Baud rate	01H	R/W	1	NONE	Uint16	0:115200,1:2400, 2:4800,3:9600, 4:19200,5:38400, 6:57600,7：115200
3	Check bit	02H	R/W	1	NONE	Uint16	0:Without check 1:Odd check 2:Even check
4	Wring method	03H	R/W	1	NONE	Uint16	0:Three-phase four-wire 1:Three-phase three-wire
5	Rated voltage	04H	R/W	1	V	Uint16	57,100,220,380
6	Rated current	05H	R/W	1	A	Uint16	50,100,200

7	Voltage ratio	06H	R/W	1	NON E	Uint16	1~9999
8	Incoming line 1 current ratio	07H	R/W	1	NON E	Uint16	1~9999
9	Incoming line2 current ratio	08H	R/W	1	NON E	Uint16	1~9999
10	Reserve	09H	R/W	1	NONE	Uint16	
11	Reserve	0AH	R/W	1	NON E	Uint16	
12	Reserve	0BH	R/W	1	NON E	Uint16	
13	Reserve	0CH	R/W	1	NON E	Uint16	
14	Electrical energy reset	0DH	R/W	1	NON E	Uint16	Write with the 10H command 0x6601 Clear the first channel 0x6602 Clear the second channel Clear other channel in the same
15	Shake frequency elimination	27H	R/W	1	NON E	Uint16	Default 2
16	High level decision level	28H	R/W	1	NON E	Uint16	30,66,100

9) Parameter data section(0x30～0x1619)

Seri al NO.	Variate	ADD	Read/ write	Byte length	Unit	Data type	Remark
1	I section outgoing line 1-phase voltage A	30H-31H	R	2	V	float	
2	I section outgoing line 2-phase voltage B	32H-33H	R	2	V	float	
3	I section outgoing line 3-phase voltage C	34H-35H	R	2	V	float	
4	I section outgoing line 4-phase voltage A	36H-37H	R	2	V	float	
5	I section outgoing line 5-phase voltage B	38H-39H	R	2	V	float	
6	I section outgoing line 6-phase voltage C	3AH-3BH	R	2	V	float	
7	I section outgoing line 7-phase voltage A	3CH-3DH	R	2	V	float	
8	I section outgoing line 8-phase voltage B	3EH-3FH	R	2	V	float	
9	I section outgoing line 9-phase voltage C	40H-41H	R	2	V	float	
10	I section outgoing line 10-phase voltage A	42H-43H	R	2	V	float	
11	I section outgoing line 11-phase voltage B	44H-45H	R	2	V	float	
12	I section outgoing line 12-phase voltage C	46H-47H	R	2	V	float	
13	II section outgoing line 1-phase voltage A	48H-49H	R	2	V	float	
14	II section outgoing line 2-phase voltage B	4AH-4BH	R	2	V	float	
15	II section outgoing line 3-phase voltage C	4CH-4DH	R	2	V	float	
16	II section outgoing line 4-phase voltage A	4EH-4FH	R	2	V	float	
	II section outgoing line 5-phase voltage B						

17		50H-51H	R	2	V	float	
18	II section outgoing line 6-phase voltage C	52H-53H	R	2	V	float	
19	II section outgoing line 7-phase voltage A	54H-55H	R	2	V	float	
20	II section outgoing line 8-phase voltage B	56H-57H	R	2	V	float	
21	II section outgoing line 9-phase voltage C	58H-59H	R	2	V	float	
22	II section outgoing line 10-phase voltage A	5AH-5BH	R	2	V	float	
23	II section outgoing line 11-phase voltage B	5CH-5DH	R	2	V	float	
24	II section outgoing line 12-phase voltage C	5EH-5FH	R	2	V	float	
25	I section outgoing line 1 voltage A	60H-61H	R	2	V	float	
26	I section outgoing line 2 voltage B	62H-63H	R	2	V	float	
27	I section outgoing line 3 voltage C	64H-65H	R	2	V	float	
28	I section outgoing line 4 voltage A	66H-67H	R	2	V	float	
29	I section outgoing line 5 voltage B	68H-69H	R	2	V	float	
30	I section outgoing line 6 voltage C	6AH-6BH	R	2	V	float	
31	I section outgoing line 7 voltage A	6CH-6DH	R	2	V	float	
32	I section outgoing line 8 voltage B	6EH-6FH	R	2	V	float	
33	I section outgoing line 9 voltage C	70H-71H	R	2	V	float	
34	I section outgoing line 10 voltage A	72H-73H	R	2	V	float	
35	I section outgoing line 11 voltage B	74H-75H	R	2	V	float	
36	I section outgoing line 12 voltage C	76H-77H	R	2	V	float	
37	II section outgoing line 1 voltage A	78H-79H	R	2	V	float	
38	II section outgoing line 2 voltage B	7AH-7BH	R	2	V	float	
39	II section outgoing line 3 voltage C	7CH-7DH	R	2	V	float	
40	II section outgoing line 4 voltage A	7EH-7FH	R	2	V	float	
41	II section outgoing line 5 voltage B	80H-81H	R	2	V	float	
42	II section outgoing line 6 voltage C	82H-83H	R	2	V	float	
43	II section outgoing line 7 voltage A	84H-85H	R	2	V	float	
44	II section outgoing line 8 voltage B	86H-87H	R	2	V	float	
45	II section outgoing line 9 voltage C	88H-89H	R	2	V	float	
46	II section outgoing line 10 voltage A	8AH-8BH	R	2	V	float	
	II section outgoing line 11 voltage B						

47		8CH-8DH	R	2	V	float	
48	II section outgoing line 12 voltage C	8EH-8FH	R	2	V	float	
49	I section outgoing line 1 current A	90H-91H	R	2	A	float	
50	I section outgoing line 2 current B	92H-93H	R	2	A	float	
51	I section outgoing line 3 current C	94H-95H	R	2	A	float	
52	I section outgoing line 4 current A	96H-97H	R	2	A	float	
53	I section outgoing line 5 current B	98H-99H	R	2	A	float	
54	I section outgoing line 6 current C	9AH-9BH	R	2	A	float	
55	I section outgoing line 7 current A	9CH-9DH	R	2	A	float	
56	I section outgoing line 8 current B	9EH-9FH	R	2	A	float	
57	I section outgoing line 9 current C	A0H-A1H	R	2	A	float	
58	I section outgoing line 10 current A	A2H-A3H	R	2	A	float	
59	I section outgoing line 11 current B	A4H-A5H	R	2	A	float	
60	I section outgoing line 12 current C	A6H-A7H	R	2	A	float	
61	II section outgoing line 1 current A	A8H-A9H	R	2	A	float	
62	II section outgoing line 2 current B	AAH-ABH	R	2	A	float	
63	II section outgoing line 3 current C	ACH-ADH	R	2	A	float	
64	II section outgoing line 4 current A	AEH-AFH	R	2	A	float	
65	II section outgoing line 5 current B	B0H-B1H	R	2	A	float	
66	II section outgoing line 6 current C	B2H-B3H	R	2	A	float	
67	II section outgoing line 7 current A	B4H-B5H	R	2	A	float	
68	II section outgoing line 8 current B	B6H-B7H	R	2	A	float	
69	II section outgoing line 9 current C	B8H-B9H	R	2	A	float	
70	II section outgoing line 10 current A	BAH-BBH	R	2	A	float	
71	II section outgoing line 11 current B	BCH-BDH	R	2	A	float	
72	II section outgoing line 12 current C	BEH-BFH	R	2	A	float	
73	I section outgoing line 1 active A	C0H-C1H	R	2	kW	float	
74	I section outgoing line 2 active B	C2H-C3H	R	2	kW	float	
75	I section outgoing line 3 active C	C4H-C5H	R	2	kW	float	
76	I section outgoing line 4 active A	C6H-C7H	R	2	kW	float	

77	I section outgoing line 5 active B	C8H-C9H	R	2	kW	float	
78	I section outgoing line 6 active C	CAH-CBH	R	2	kW	float	
79	I section outgoing line 7 active A	CCH-CDH	R	2	kW	float	
80	I section outgoing line 8 active B	CEH-CFH	R	2	kW	float	
81	I section outgoing line 9 active C	D0H-D1H	R	2	kW	float	
82	I section outgoing line 10 active A	D2H-D3H	R	2	kW	float	
83	I section outgoing line 11 active B	D4H-D5H	R	2	kW	float	
84	I section outgoing line 12 active C	D6H-D7H	R	2	kW	float	
85	II section outgoing line 1 active A	D8H-D9H	R	2	kW	float	
86	II section outgoing line 2 active B	DAH-DBH	R	2	kW	float	
87	II section outgoing line 3 active C	DCH-DDH	R	2	kW	float	
88	II section outgoing line 4 active A	DEH-DFH	R	2	kW	float	
89	II section outgoing line 5 active B	E0H-E1H	R	2	kW	float	
90	II section outgoing line 6 active C	E2H-E3H	R	2	kW	float	
91	II section outgoing line 7 active A	E4H-E5H	R	2	kW	float	
92	II section outgoing line 8 active B	E6H-E7H	R	2	kW	float	
93	II section outgoing line 9 active C	E8H-E9H	R	2	kW	float	
94	II section outgoing line 10 active A	EAH-EBH	R	2	kW	float	
95	II section outgoing line 11 active B	ECH-EDH	R	2	kW	float	
96	II section outgoing line 12 active C	EEH-EFH	R	2	kW	float	
97	I section outgoing line 1 reactive A	F0H-F1H	R	2	kvar	float	
98	I section outgoing line 2 reactive B	F2H-F3H	R	2	kvar	float	
99	I section outgoing line 3 reactive C	F4H-F5H	R	2	kvar	float	
100	I section outgoing line 4 reactive A	F6H-F7H	R	2	kvar	float	
101	I section outgoing line 5 reactive B	F8H-F9H	R	2	kvar	float	
102	I section outgoing line 6 reactive C	FAH-FBH	R	2	kvar	float	
103	I section outgoing line 7 reactive A	FCH-FDH	R	2	kvar	float	
104	I section outgoing line 8 reactive B	FEH-FFH	R	2	kvar	float	
105	I section outgoing line 9 reactive C	100H-101H	R	2	kvar	float	
	I section outgoing line 10 reactive A						

106		102H-103H	R	2	kvar	float	
107	I section outgoing line 11 reactive B	104H-105H	R	2	kvar	float	
108	I section outgoing line 12 reactive C	106H-107H	R	2	kvar	float	
109	II section outgoing line 1 reactive A	108H-109H	R	2	kvar	float	
110	II section outgoing line 2 reactive B	10AH-10BH	R	2	kvar	float	
111	II section outgoing line 3 reactive C	10CH-10DH	R	2	kvar	float	
112	II section outgoing line 4 reactive A	10EH-10FH	R	2	kvar	float	
113	II section outgoing line 5 reactive B	110H-111H	R	2	kvar	float	
114	II section outgoing line 6 reactive C	112H-113H	R	2	kvar	float	
115	II section outgoing line 7 reactive A	114H-115H	R	2	kvar	float	
116	II section outgoing line 8 reactive B	116H-117H	R	2	kvar	float	
117	II section outgoing line 9 reactive C	118H-119H	R	2	kvar	float	
118	II section outgoing line 10 reactive A	11AH-11BH	R	2	kvar	float	
119	II section outgoing line 11 reactive B	11CH-11DH	R	2	kvar	float	
120	II section outgoing line 12 reactive C	11EH-11FH	R	2	kvar	float	
121	I section outgoing line 1 apparent A	120H-121H	R	2	kVA	float	
122	I section outgoing line 2 apparent B	122H-123H	R	2	kVA	float	
123	I section outgoing line 3 apparent C	124H-125H	R	2	kVA	float	
124	I section outgoing line 4 apparent A	126H-127H	R	2	kVA	float	
125	I section outgoing line 5 apparent B	128H-129H	R	2	kVA	float	
126	I section outgoing line 6 apparent C	12AH-12BH	R	2	kVA	float	
127	I section outgoing line 7 apparent A	12CH-12DH	R	2	kVA	float	
128	I section outgoing line 8 apparent B	12EH-12FH	R	2	kVA	float	
129	I section outgoing line 9 apparent C	130H-131H	R	2	kVA	float	
130	I section outgoing line 10 apparent A	132H-133H	R	2	kVA	float	
131	I section outgoing line 11 apparent B	134H-135H	R	2	kVA	float	
132	I section outgoing line 12 apparent C	136H-137H	R	2	kVA	float	
133	II section outgoing line 1 apparent A	138H-139H	R	2	kVA	float	
134	II section outgoing line 2 apparent B	13AH-13BH	R	2	kVA	float	
135	II section outgoing line 3 apparent C	13CH-13DH	R	2	kVA	float	

136	II section outgoing line 4 apparent A	13EH-13FH	R	2	kVA	float	
137	II section outgoing line 5 apparent B	140H-141H	R	2	kVA	float	
138	II section outgoing line 6 apparent C	142H-143H	R	2	kVA	float	
139	II section outgoing line 7 apparent A	144H-145H	R	2	kVA	float	
140	II section outgoing line 8 apparent B	146H-147H	R	2	kVA	float	
141	II section outgoing line 9 apparent C	148H-149H	R	2	kVA	float	
142	II section outgoing line 10 apparent A	14AH-14BH	R	2	kVA	float	
143	II section outgoing line 11 apparent B	14CH-14DH	R	2	kVA	float	
144	II section outgoing line 12 apparent C	14EH-14FH	R	2	kVA	float	
145	I section outgoing line 1 factor A	150H-151H	R	2	NONE	float	
146	I section outgoing line 2 factor B	152H-153H	R	2	NONE	float	
147	I section outgoing line 3 factor C	154H-155H	R	2	NONE	float	
148	I section outgoing line 4 factor A	156H-157H	R	2	NONE	float	
149	I section outgoing line 5 factor B	158H-159H	R	2	NONE	float	
150	I section outgoing line 6 factor C	15AH-15BH	R	2	NONE	float	
151	I section outgoing line 7 factor A	15CH-15DH	R	2	NONE	float	
152	I section outgoing line 8 factor B	15EH-15FH	R	2	NONE	float	
153	I section outgoing line 9 factor C	160H-161H	R	2	NONE	float	
154	I section outgoing line10 factor A	162H-163H	R	2	NONE	float	
155	I section outgoing line11 factor B	164H-165H	R	2	NONE	float	
156	I section outgoing line12 factor C	166H-167H	R	2	NONE	float	
157	II section outgoing line1 factor A	168H-169H	R	2	NONE	float	
158	II section outgoing line 2 factor B	16AH-16BH	R	2	NONE	float	
159	II section outgoing line 3 factor C	16CH-16DH	R	2	NONE	float	
160	II section outgoing line 4 factor A	16EH-16FH	R	2	NONE	float	
161	II section outgoing line 5 factor B	170H-171H	R	2	NONE	float	
162	II section outgoing line 6 factor C	172H-173H	R	2	NONE	float	
163	II section outgoing line 7 factor A	174H-175H	R	2	NONE	float	
164	II section outgoing line 8 factor B	176H-177H	R	2	NONE	float	
	II section outgoing line 9 factor C						

165		178H-179H	R	2	NONE	float	
166	II section outgoing line 10 factor A	17AH-17BH	R	2	NONE	float	
167	II section outgoing line 11 factor B	17CH-17DH	R	2	NONE	float	
168	II section outgoing line 12 factor C	17EH-17FH	R	2	NONE	float	
169	I section outgoing line 123 frequency ABC	180H-181H	R	2	HZ	float	
170	I section outgoing line 456 frequency ABC	182H-183H	R	2	HZ	float	
171	I section outgoing line 789 frequency ABC	184H-185H	R	2	HZ	float	
172	I section outgoing line 10,11,12 frequency ABC	186H-187H	R	2	HZ	float	
173	II section outgoing line 123 frequency ABC	188H-189H	R	2	HZ	float	
174	II section outgoing line 456 frequency ABC	18AH-18BH	R	2	HZ	float	
175	II section outgoing line 789 frequency ABC	18CH-18DH	R	2	HZ	float	
176	II section outgoing line 10,11,12 frequency ABC	18EH-18FH	R	2	HZ	float	
177	I section outgoing line 1,2,3 active ABC	190H-191H	R	2	kW	float	
178	I section outgoing line 4,5,6 active ABC	192H-193H	R	2	kW	float	
179	I section outgoing line 7,8,9 active ABC	194H-195H	R	2	kW	float	
180	I section outgoing line 10,11,12 active ABC	196H-197H	R	2	kW	float	
181	II section outgoing line 1,2,3 active ABC	198H-199H	R	2	kW	float	
182	II section outgoing line 4,5,6 active ABC	19AH-19BH	R	2	kW	float	
183	II section outgoing line 7,8,9 active ABC	19CH-19DH	R	2	kW	float	
184	II section outgoing line 10,11,12 active ABC	19EH-19FH	R	2	kW	float	
185	I section outgoing line 1,2,3 reactive ABC	1A0H-1A1H	R	2	kvar	float	
186	I section outgoing line 4,5,6 reactive ABC	1A2H-1A3H	R	2	kvar	float	
187	I section outgoing line 7,8,9 reactive ABC	1A4H-1A5H	R	2	kvar	float	
188	I section outgoing line 10,11,12 reactive ABC	1A6H-1A7H	R	2	kvar	float	
189	II section outgoing line 1,2,3 reactive ABC	1A8H-1A9H	R	2	kvar	float	
190	II section outgoing line 4,5,6 reactive ABC	1AAH-1ABH	R	2	kvar	float	
191	II section outgoing line 7,8,9 reactive ABC	1ACH-1ADH	R	2	kvar	float	
192	II section outgoing line 10,11,12 reactive ABC	1AEH-1AFH	R	2	kvar	float	
193	I section outgoing line 1,2,3 apparent ABC	1B0H-1B1H	R	2	kVA	float	
194	I section outgoing line 4,5,6 apparent ABC	1B2H-1B3H	R	2	kVA	float	

195	I section outgoing line 7,8,9 apparent ABC	1B4H-1B5H	R	2	kVA	float	
196	I section outgoing line 10,11,12 apparent ABC	1B6H-1B7H	R	2	kVA	float	
197	II section outgoing line 1,2,3 apparent ABC	1B8H-1B9H	R	2	kVA	float	
198	II section outgoing line4,5,6 apparent ABC	1BAH-1BBH	R	2	kVA	float	
199	II section outgoing line7,8,9 apparent ABC	1BCH-1BDH	R	2	kVA	float	
200	II section outgoing line10,11,12 apparent ABC	1BEH-1BFH	R	2	kVA	float	
201	I section outgoing line 1,2,3 factor ABC	1C0H-1C1H	R	2	NONE	float	
202	I section outgoing line 4,5,6 factor ABC	1C2H-1C3H	R	2	NONE	float	
203	I section outgoing line 7,8,9 factor ABC	1C4H-1C5H	R	2	NONE	float	
204	I section outgoing line 10,11,12 factor ABC	1C6H-1C7H	R	2	NONE	float	
205	II section outgoing line 1,2,3 factor ABC	1C8H-1C9H	R	2	NONE	float	
206	II section outgoing line 4,5,6 factor ABC	1CAH-1CBH	R	2	NONE	float	
207	II section outgoing line 7,8,9 factor ABC	1CCH-1CDH	R	2	NONE	float	
208	II section outgoing line 10,11,12 factor ABC	1CEH-1CFH	R	2	NONE	float	
209	I section outgoing line 1 active energy A	1D0H-1D1H	R	2	0.01kWh	Uint32	
210	I section outgoing line 2 active energy B	1D2H-1D3H	R	2	0.01kWh	Uint32	
211	I section outgoing line 3 active energy C	1D4H-1D5H	R	2	0.01kWh	Uint32	
212	I section outgoing line 4 active energy A	1D6H-1D7H	R	2	0.01kWh	Uint32	
213	I section outgoing line 5 active energy B	1D8H-1D9H	R	2	0.01kWh	Uint32	
214	I section outgoing line 6 active energy C	1DAH-1DBH	R	2	0.01kWh	Uint32	
215	I section outgoing line 7 active energy A	1DCH-1DDH	R	2	0.01kWh	Uint32	
216	I section outgoing line 8 active energy B	1DEH-1DFH	R	2	0.01kWh	Uint32	
217	I section outgoing line 9 active energy C	1E0H-1E1H	R	2	0.01kWh	Uint32	
218	I section outgoing line 10 active energy A	1E2H-1E3H	R	2	0.01kWh	Uint32	
219	I section outgoing line 11 active energy B	1E4H-1E5H	R	2	0.01kWh	Uint32	
220	I section outgoing line 12 active energy C	1E6H-1E7H	R	2	0.01kWh	Uint32	
221	II section outgoing line 1 active energy A	1E8H-1E9H	R	2	0.01kWh	Uint32	
222	II section outgoing line 2 active energy B	1EAH-1EBH	R	2	0.01kWh	Uint32	
223	II section outgoing line 3 active energy C	1ECH-1EDH	R	2	0.01kWh	Uint32	
	II section outgoing line 4 active energy A				0.01kWh		

224		1EEH-1EFH	R	2		Uint32	
225	II section outgoing line 5 active energy B	1F0H-1F1H	R	2	0.01kWh	Uint32	
226	II section outgoing line 6 active energy C	1F2H-1F3H	R	2	0.01kWh	Uint32	
227	II section outgoing line 7 active energy A	1F4H-1F5H	R	2	0.01kWh	Uint32	
228	II section outgoing line 8 active energy B	1F6H-1F7H	R	2	0.01kWh	Uint32	
229	II section outgoing line 9 active energy C	1F8H-1F9H	R	2	0.01kWh	Uint32	
230	II section outgoing line 10 active energy A	1FAH-1FBH	R	2	0.01kWh	Uint32	
231	II section outgoing line 11 active energy B	1FCH-1FDH	R	2	0.01kWh	Uint32	
232	II section outgoing line 12 active energy C	1FEH-1FFH	R	2	0.01kWh	Uint32	
233	I section outgoing line 1 reactive energy A	200H-201H	R	2	0.01kvarh	Uint32	
234	I section outgoing line 2 reactive energy B	202H-203H	R	2	0.01kvarh	Uint32	
235	I section outgoing line 3 reactive energy C	204H-205H	R	2	0.01kvarh	Uint32	
236	I section outgoing line 4 reactive energy A	206H-207H	R	2	0.01kvarh	Uint32	
237	I section outgoing line 5 reactive energy B	208H-209H	R	2	0.01kvarh	Uint32	
238	I section outgoing line 6 reactive energy C	20AH-20BH	R	2	0.01kvarh	Uint32	
239	I section outgoing line 7 reactive energy A	20CH-20DH	R	2	0.01kvarh	Uint32	
240	I section outgoing line 8 reactive energy B	20EH-20FH	R	2	0.01kvarh	Uint32	
241	I section outgoing line 9 reactive energy C	210H-211H	R	2	0.01kvarh	Uint32	
242	I section outgoing line 10 reactive energy A	212H-213H	R	2	0.01kvarh	Uint32	
243	I section outgoing line 11 reactive energy B	214H-215H	R	2	0.01kvarh	Uint32	
244	I section outgoing line 12 reactive energy C	216H-217H	R	2	0.01kvarh	Uint32	
245	II section outgoing line 1 reactive energy A	218H-219H	R	2	0.01kvarh	Uint32	
246	II section outgoing line 2 reactive energy B	21AH-21BH	R	2	0.01kvarh	Uint32	
247	II section outgoing line 3 reactive energy C	21CH-21DH	R	2	0.01kvarh	Uint32	
248	II section outgoing line 4 reactive energy A	21EH-21FH	R	2	0.01kvarh	Uint32	
249	II section outgoing line 5 reactive energy B	220H-221H	R	2	0.01kvarh	Uint32	
250	II section outgoing line 6 reactive energy C	222H-223H	R	2	0.01kvarh	Uint32	
251	II section outgoing line 7 reactive energy A	224H-225H	R	2	0.01kvarh	Uint32	
252	II section outgoing line 8 reactive energy B	226H-227H	R	2	0.01kvarh	Uint32	
253	II section outgoing line 9 reactive energy C	228H-229H	R	2	0.01kvarh	Uint32	

254	II section outgoing line 10 reactive energy A	22AH-22BH	R	2	0.01kvarh	Uint32	
255	II section outgoing line 11 reactive energy B	22CH-22DH	R	2	0.01kvarh	Uint32	
256	II section outgoing line 12 reactive energy C	22EH-22FH	R	2	0.01kvarh	Uint32	
257	I section outgoing line 123 active energy ABC	230H-231H	R	2	0.01kWh	Uint32	
258	I section outgoing line 456 active energy ABC	232H-233H	R	2	0.01kWh	Uint32	
259	I section outgoing line 789 active energy ABC	234H-235H	R	2	0.01kWh	Uint32	
260	I section outgoing line 10,11,12 active energy ABC	236H-237H	R	2	0.01kWh	Uint32	
261	II section outgoing line 123 active energy ABC	238H-239H	R	2	0.01kWh	Uint32	
262	II section outgoing line 456 active energy ABC	23AH-23BH	R	2	0.01kWh	Uint32	
263	II section outgoing line 789 active energy ABC	23CH-23DH	R	2	0.01kWh	Uint32	
264	II section outgoing line 10,11,12 active energy ABC	23EH-23FH	R	2	0.01kWh	Uint32	
265	I section outgoing line 1,2,3 reactive energy ABC	240H-241H	R	2	0.01kvarh	Uint32	
266	I section outgoing line 4,5,6 reactive energy ABC	242H-243H	R	2	0.01kvarh	Uint32	
267	I section outgoing line 7,8,9 reactive energy ABC	244H-245H	R	2	0.01kvarh	Uint32	
268	I section outgoing line 10,11,12 reactive energy ABC	246H-247H	R	2	0.01kvarh	Uint32	
269	II section outgoing line 1,2,3 reactive energy ABC	248H-249H	R	2	0.01kvarh	Uint32	
270	II section outgoing line 4,5,6 reactive energy ABC	24AH-24BH	R	2	0.01kvarh	Uint32	
271	II section outgoing line 7,8,9 reactive energy ABC	24CH-24DH	R	2	0.01kvarh	Uint32	
272	II section outgoing line 10,11,12 reactive energy ABC	24EH-24FH	R	2	0.01kvarh	Uint32	
273	A phase total current harmonic content(I section outgoing line 1)	30AH	R	1	0.01%	Uint16	
274	A phase current 2-31 times harmonic content(I section outgoing line 1)	30BH-328H	R	1	0.01%	Uint16	
275	B phase total current harmonic content(I section outgoing line 2)	329H	R	1	0.01%	Uint16	
276	B phase current 2-31 times harmonic content(I section outgoing line 2)	32AH-347H	R	1	0.01%	Uint16	
277	C phase total current harmonic content(I section outgoing line 3)	348H	R	1	0.01%	Uint16	
278	C phase current 2-31 times harmonic content(I section outgoing line 3)	349H-366H	R	1	0.01%	Uint16	
279	A phase total current harmonic content(I section outgoing line 4)	367H	R	1	0.01%	Uint16	
280	A phase current 2-31 times harmonic content(I section outgoing line 4)	368H-385H	R	1	0.01%	Uint16	
281	B phase total current harmonic content(I section outgoing line 5)	386H	R	1	0.01%	Uint16	
282	B phase current 2-31 times harmonic content(I section outgoing line 5)	387H-3A4H	R	1	0.01%	Uint16	
	C phase total current harmonic content(I						

283	section outgoing line 6)	3A5H	R	1	0.01%	Uint16	
284	C phase current 2-31 times harmonic content(I section outgoing line 6)	3A6H-3C3H	R	1	0.01%	Uint16	
285	A phase total current harmonic content(I section outgoing line 7)	3C4H	R	1	0.01%	Uint16	
286	A phase current 2-31 times harmonic content(I section outgoing line 7)	3C5H-3E2H	R	1	0.01%	Uint16	
287	B phase total current harmonic content(I section outgoing line 8)	3E3H	R	1	0.01%	Uint16	
288	B phase current 2-31 times harmonic content(I section outgoing line 8)	3E4H-401H	R	1	0.01%	Uint16	
289	C phase total current harmonic content(I section outgoing line 9)	402H	R	1	0.01%	Uint16	
290	C phase current 2-31 times harmonic content(I section outgoing line 9)	403H-420H	R	1	0.01%	Uint16	
291	A phase total current harmonic content(I section outgoing line 10)	421H	R	1	0.01%	Uint16	
292	A phase current 2-31 times harmonic content(I section outgoing line 10)	422H-43FH	R	1	0.01%	Uint16	
293	B phase total current harmonic content(I section outgoing line 11)	440H	R	1	0.01%	Uint16	
294	B phase current 2-31 times harmonic content(I section outgoing line 11)	441H-45EH	R	1	0.01%	Uint16	
295	C phase total current harmonic content(I section outgoing line 12)	45FH	R	1	0.01%	Uint16	
296	C phase current 2-31 times harmonic content(I section outgoing line 12)	460H-47DH	R	1	0.01%	Uint16	
297	A phase total current harmonic content(II section outgoing line 1)	47EH	R	1	0.01%	Uint16	
298	A phase current 2-31 times harmonic content(II section outgoing line 1)	47FH-49CH	R	1	0.01%	Uint16	
299	B phase total current harmonic content(II section outgoing line 2)	49DH	R	1	0.01%	Uint16	
300	B phase current 2-31 times harmonic content(II section outgoing line 2)	49EH-4BBH	R	1	0.01%	Uint16	
301	C phase total current harmonic content(II section outgoing line 3)	4BCH	R	1	0.01%	Uint16	
302	C phase current 2-31 times harmonic content(II section outgoing line 3)	4BDH=4DAH	R	1	0.01%	Uint16	
303	A phase total current harmonic content(II section outgoing line 4)	4DBH	R	1	0.01%	Uint16	
304	A phase current 2-31 times harmonic content(II section outgoing line 4)	4DCH-4F9H	R	1	0.01%	Uint16	
305	B phase total current harmonic content(II section outgoing line 5)	4FAH	R	1	0.01%	Uint16	
306	B phase current 2-31 times harmonic content(II section outgoing line 5)	4FBH-518H	R	1	0.01%	Uint16	
307	C phase total current harmonic content(II section outgoing line 6)	519H	R	1	0.01%	Uint16	
308	C phase current 2-31 times harmonic content(II section outgoing line 6)	51AH-537H	R	1	0.01%	Uint16	
309	A phase total current harmonic content(II section outgoing line 7)	538H	R	1	0.01%	Uint16	
310	A phase current 2-31 times harmonic content(II section outgoing line 7)	539H-556H	R	1	0.01%	Uint16	
311	B phase total current harmonic content(II	557H	R	1	0.01%	Uint16	

	section outgoing line 8)						
312	B phase current 2-31 times harmonic content(II section outgoing line 8)	558H-575H	R	1	0.01%	Uint16	
313	C phase total current harmonic content(II section outgoing line 9)	576H	R	1	0.01%	Uint16	
314	C phase current 2-31 times harmonic content(II section outgoing line 9)	577H-594H	R	1	0.01%	Uint16	
315	A phase total current harmonic content(II section outgoing line 10)	595H	R	1	0.01%	Uint16	
316	A phase current 2-31 times harmonic content(II section outgoing line10)	596H-5B3H	R	1	0.01%	Uint16	
317	B phase total current harmonic content(II section outgoing line 11)	5B4H	R	1	0.01%	Uint16	
318	B phase current 2-31 times harmonic content(II section outgoing line 11)	5B5H-5D2H	R	1	0.01%	Uint16	
319	C phase total current harmonic content(II section outgoing line 12)	5D3H	R	1	0.01%	Uint16	
320	C phase current 2-31 times harmonic content(II section outgoing line 12)	5D4H-5F1H	R	1	0.01%	Uint16	
321	I section total current harmonic content(outgoing line 1-outgoing line 12) A-B-C	602H-60DH	R	1	0.01%	Uint16	
322	II section total current harmonic content(outgoing line 1-outgoing line 12) A-B-C	60EH-619H	R	1	0.01%	Uint16	
323	I section outgoing line 13 phase voltage A	1030H-1031H	R	2	V	float	
324	I section outgoing line 14 phase voltage B	1032H-1033H	R	2	V	float	
325	I section outgoing line 15 phase voltage C	1034H-1035H	R	2	V	float	
326	I section outgoing line 16 phase voltage A	1036H-1037H	R	2	V	float	
327	I section outgoing line 17 phase voltage B	1038H-1039H	R	2	V	float	
328	I section outgoing line 18 phase voltage C	103AH-103BH	R	2	V	float	
329	I section outgoing line 19 phase voltage A	103CH-103DH	R	2	V	float	
330	I section outgoing line 20 phase voltage B	103EH-103FH	R	2	V	float	
331	I section outgoing line 21 phase voltage C	1040H-1041H	R	2	V	float	
332	I section outgoing line 22 phase voltage A	1042H-1043H	R	2	V	float	
333	I section outgoing line 23 phase voltage B	1044H-1045H	R	2	V	float	
334	I section outgoing line 24 phase voltage C	1046H-1047H	R	2	V	float	
335	II section outgoing line 13 phase voltage A	1048H-1049H	R	2	V	float	
336	II section outgoing line 14 phase voltage B	104AH-104BH	R	2	V	float	
	II section outgoing line 15 phase voltage C						

337		104CH-104DH	R	2	V	float	
338	II section outgoing line 16 phase voltage A	104EH-104FH	R	2	V	float	
339	II section outgoing line 17 phase voltage B	1050H-1051H	R	2	V	float	
340	II section outgoing line 18 phase voltage C	1052H-1053H	R	2	V	float	
341	II section outgoing line 19 phase voltage A	1054H-1055H	R	2	V	float	
342	II section outgoing line 20 phase voltage B	1056H-1057H	R	2	V	float	
343	II section outgoing line 21 phase voltage C	1058H-1059H	R	2	V	float	
344	II section outgoing line 22 phase voltage A	105AH-105BH	R	2	V	float	
345	II section outgoing line 23 phase voltage B	105CH-105DH	R	2	V	float	
346	II section outgoing line 24 phase voltage C	105EH-105FH	R	2	V	float	
347	I section outgoing line line 13 voltage A	1060H-1061H	R	2	V	float	
348	I section outgoing line line14 voltage B	1062H-1063H	R	2	V	float	
349	I section outgoing line line15 voltage C	1064H-1065H	R	2	V	float	
350	I section outgoing line line16 voltage A	1066H-1067H	R	2	V	float	
351	I section outgoing line line17 voltage B	1068H-1069H	R	2	V	float	
352	I section outgoing line line18 voltage C	106AH-106BH	R	2	V	float	
353	I section outgoing line line19 voltage A	106CH-106DH	R	2	V	float	
354	I section outgoing line line20 voltage B	106EH-106FH	R	2	V	float	
355	I section outgoing line line21 voltage C	1070H-1071H	R	2	V	float	
356	I section outgoing line line22 voltage A	1072H-1073H	R	2	V	float	
357	I section outgoing line line23 voltage B	1074H-1075H	R	2	V	float	
358	I section outgoing line line24 voltage C	1076H-1077H	R	2	V	float	
359	II section outgoing line line13 voltage A	1078H-1079H	R	2	V	float	
360	II section outgoing line line14 voltage B	107AH-107BH	R	2	V	float	
361	II section outgoing line line15 voltage C	107CH-107DH	R	2	V	float	
362	II section outgoing line line16 voltage A	107EH-107FH	R	2	V	float	
363	II section outgoing line line 17 voltage B	1080H-1081H	R	2	V	float	
364	II section outgoing line line 18 voltage C	1082H-1083H	R	2	V	float	
365	II section outgoing line line 19 voltage A	1084H-1085H	R	2	V	float	
366	II section outgoing line line 20 voltage B	1086H-1087H	R	2	V	float	

367	II section outgoing line line 21 voltage C	1088H-1089H	R	2	V	float	
368	II section outgoing line line 22 voltage A	108AH-108BH	R	2	V	float	
369	II section outgoing line line 23 voltage B	108CH-108DH	R	2	V	float	
370	II section outgoing line line 24 voltage C	108EH-108FH	R	2	V	float	
371	I section outgoing line 13 current A	1090H-1091H	R	2	A	float	
372	I section outgoing line 14 current B	1092H-1093H	R	2	A	float	
373	I section outgoing line 15 current C	1094H-1095H	R	2	A	float	
374	I section outgoing line 16 current A	1096H-1097H	R	2	A	float	
375	I section outgoing line 17 current B	1098H-1099H	R	2	A	float	
376	I section outgoing line 18 current C	109AH-109BH	R	2	A	float	
377	I section outgoing line 19 current A	109CH-109DH	R	2	A	float	
378	I section outgoing line 20 current B	109EH-109FH	R	2	A	float	
379	I section outgoing line 21 current C	10A0H-10A1H	R	2	A	float	
380	I section outgoing line 22 current A	10A2H-10A3H	R	2	A	float	
381	I section outgoing line 23 current B	10A4H-10A5H	R	2	A	float	
382	I section outgoing line 24 current C	10A6H-10A7H	R	2	A	float	
383	II section outgoing line 13 current A	10A8H-10A9H	R	2	A	float	
384	II section outgoing line 14 current B	10AAH-10ABH	R	2	A	float	
385	II section outgoing line 15 current C	10ACH-10ADH	R	2	A	float	
386	II section outgoing line 16 current A	10AEH-10AFH	R	2	A	float	
387	II section outgoing line 17 current B	10B0H-10B1H	R	2	A	float	
388	II section outgoing line 18 current C	10B2H-10B3H	R	2	A	float	
389	II section outgoing line 19 current A	10B4H-10B5H	R	2	A	float	
390	II section outgoing line 20 current B	10B6H-10B7H	R	2	A	float	
391	II section outgoing line 21 current C	10B8H-10B9H	R	2	A	float	
392	II section outgoing line 22 current A	10BAH-10BBH	R	2	A	float	
393	II section outgoing line 23 current B	10BCH-10BDH	R	2	A	float	
394	II section outgoing line 24 current C	10BEH-10BFH	R	2	A	float	
395	I section outgoing line 13 active A	10C0H-10C1H	R	2	kW	float	
	I section outgoing line 14 active B						

396		10C2H-10C3H	R	2	kW	float	
397	I section outgoing line 15 active C	10C4H-10C5H	R	2	kW	float	
398	I section outgoing line 16 active A	10C6H-10C7H	R	2	kW	float	
399	I section outgoing line 17 active B	10C8H-10C9H	R	2	kW	float	
400	I section outgoing line 18 active C	10CAH-10CBH	R	2	kW	float	
401	I section outgoing line 19 active A	10CCH-10CDH	R	2	kW	float	
402	I section outgoing line 20 active B	10CEH-10CFH	R	2	kW	float	
403	I section outgoing line 21 active C	10D0H-10D1H	R	2	kW	float	
404	I section outgoing line 22 active A	10D2H-10D3H	R	2	kW	float	
405	I section outgoing line 23 active B	10D4H-10D5H	R	2	kW	float	
406	I section outgoing line 24 active C	10D6H-10D7H	R	2	kW	float	
407	II section outgoing line 13 active A	10D8H-10D9H	R	2	kW	float	
408	II section outgoing line 14 active B	10DAH-10DBH	R	2	kW	float	
409	II section outgoing line 15 active C	10DCH-10DDH	R	2	kW	float	
410	II section outgoing line 16 active A	10DEH-10DFH	R	2	kW	float	
411	II section outgoing line 17 active B	10E0H-10E1H	R	2	kW	float	
412	II section outgoing line 18 active C	10E2H-10E3H	R	2	kW	float	
413	II section outgoing line 19 active A	10E4H-10E5H	R	2	kW	float	
414	II section outgoing line 20 active B	10E6H-10E7H	R	2	kW	float	
415	II section outgoing line 21 active C	10E8H-10E9H	R	2	kW	float	
416	II section outgoing line 22 active A	10EAH-10EBH	R	2	kW	float	
417	II section outgoing line 23 active B	10ECH-10EDH	R	2	kW	float	
418	II section outgoing line 24 active C	10EEH-10EFH	R	2	kW	float	
419	I section outgoing line 13 reactive A	10F0H-10F1H	R	2	kvar	float	
420	I section outgoing line 14 reactive B	10F2H-10F3H	R	2	kvar	float	
421	I section outgoing line 15 reactive C	10F4H-10F5H	R	2	kvar	float	
422	I section outgoing line 16 reactive A	10F6H-10F7H	R	2	kvar	float	
423	I section outgoing line 17 reactive B	10F8H-10F9H	R	2	kvar	float	
424	I section outgoing line 18 reactive C	10FAH-10FBH	R	2	kvar	float	
425	I section outgoing line 19 reactive A	10FCH-10FDH	R	2	kvar	float	

426	I section outgoing line 20 reactive B	10FEH-10FFH	R	2	kvar	float	
427	I section outgoing line 21 reactive C	1100H-1101H	R	2	kvar	float	
428	I section outgoing line 22 reactive A	1102H-1103H	R	2	kvar	float	
429	I section outgoing line 23 reactive B	1104H-1105H	R	2	kvar	float	
430	I section outgoing line 24 reactive C	1106H-1107H	R	2	kvar	float	
431	II section outgoing line 13 reactive A	1108H-1109H	R	2	kvar	float	
432	II section outgoing line 14 reactive B	110AH-110BH	R	2	kvar	float	
433	II section outgoing line 15 reactive C	110CH-110DH	R	2	kvar	float	
434	II section outgoing line 16 reactive A	110EH-110FH	R	2	kvar	float	
435	II section outgoing line 17 reactive B	1110H-1111H	R	2	kvar	float	
436	II section outgoing line 18 reactive C	1112H-1113H	R	2	kvar	float	
437	II section outgoing line 19 reactive A	1114H-1115H	R	2	kvar	float	
438	II section outgoing line 20 reactive B	1116H-1117H	R	2	kvar	float	
439	II section outgoing line 21 reactive C	1118H-1119H	R	2	kvar	float	
440	II section outgoing line 22 reactive A	111AH-111BH	R	2	kvar	float	
441	II section outgoing line 23 reactive B	111CH-111DH	R	2	kvar	float	
442	II section outgoing line 24 reactive C	111EH-111FH	R	2	kvar	float	
443	I section outgoing line 13 apparent A	1120H-1121H	R	2	kVA	float	
444	I section outgoing line 14 apparent B	1122H-1123H	R	2	kVA	float	
445	I section outgoing line 15 apparent C	1124H-1125H	R	2	kVA	float	
446	I section outgoing line 16 apparent A	1126H-1127H	R	2	kVA	float	
447	I section outgoing line 17 apparent B	1128H-1129H	R	2	kVA	float	
448	I section outgoing line 18 apparent C	112AH-112BH	R	2	kVA	float	
449	I section outgoing line 19 apparent A	112CH-112DH	R	2	kVA	float	
450	I section outgoing line 20 apparent B	112EH-112FH	R	2	kVA	float	
451	I section outgoing line 21 apparent C	1130H-1131H	R	2	kVA	float	
452	I section outgoing line 22 apparent A	1132H-1133H	R	2	kVA	float	
453	I section outgoing line 23 apparent B	1134H-1135H	R	2	kVA	float	
454	I section outgoing line 24 apparent C	1136H-1137H	R	2	kVA	float	
455	II section outgoing line 13 apparent A	1138H-1139H	R	2	kVA	float	

456	II section outgoing line 14 apparent B	113AH-113BH	R	2	kVA	float	
457	II section outgoing line 15 apparent C	113CH-113DH	R	2	kVA	float	
458	II section outgoing line 16 apparent A	113EH-113FH	R	2	kVA	float	
459	II section outgoing line 17 apparent B	1140H-1141H	R	2	kVA	float	
460	II section outgoing line 18 apparent C	1142H-1143H	R	2	kVA	float	
461	II section outgoing line 19 apparent A	1144H-1145H	R	2	kVA	float	
462	II section outgoing line 20 apparent B	1146H-1147H	R	2	kVA	float	
463	II section outgoing line 21 apparent C	1148H-1149H	R	2	kVA	float	
464	II section outgoing line 22 apparent A	114AH-114BH	R	2	kVA	float	
465	II section outgoing line 23 apparent B	114CH-114DH	R	2	kVA	float	
466	II section outgoing line 24 apparent C	114EH-114FH	R	2	kVA	float	
467	I section outgoing line 13 factor A	1150H-1151H	R	2	NONE	float	
468	I section outgoing line 14 factor B	1152H-1153H	R	2	NONE	float	
469	I section outgoing line 15 factor C	1154H-1155H	R	2	NONE	float	
470	I section outgoing line 16 factor A	1156H-1157H	R	2	NONE	float	
471	I section outgoing line 17 factor B	1158H-1159H	R	2	NONE	float	
472	I section outgoing line 18 factor C	115AH-115BH	R	2	NONE	float	
473	I section outgoing line 19 factor A	115CH-115DH	R	2	NONE	float	
474	I section outgoing line 20 factor B	115EH-115FH	R	2	NONE	float	
475	I section outgoing line 21 factor C	1160H-1161H	R	2	NONE	float	
476	I section outgoing line 22 factor A	1162H-1163H	R	2	NONE	float	
477	I section outgoing line 23 factor B	1164H-1165H	R	2	NONE	float	
478	I section outgoing line 24 factor C	1166H-1167H	R	2	NONE	float	
479	II section outgoing line 13 factor A	1168H-1169H	R	2	NONE	float	
480	II section outgoing line 14 factor B	116AH-116BH	R	2	NONE	float	
481	II section outgoing line 15 factor C	116CH-116DH	R	2	NONE	float	
482	II section outgoing line 16 factor A	116EH-116FH	R	2	NONE	float	
483	II section outgoing line 17 factor B	1170H-1171H	R	2	NONE	float	
484	II section outgoing line 18 factor C	1172H-1173H	R	2	NONE	float	
485	II section outgoing line 19 factor A	1174H-1175H	R	2	NONE	float	
486	II section outgoing line 20 factor B	1176H-1177H	R	2	NONE	float	
487	II section outgoing line 21 factor C	1178H-1179H	R	2	NONE	float	

488	II section outgoing line 22 factor A	117AH-117BH	R	2	NONE	float	
489	II section outgoing line 23 factor B	117CH-117DH	R	2	NONE	float	
490	II section outgoing line 24 factor C	117EH-117FH	R	2	NONE	float	
491	I section outgoing line 13,14,15 frequency ABC	1180H-1181H	R	2	HZ	float	
492	I section outgoing line 16,17,18frequency ABC	1182H-1183H	R	2	HZ	float	
493	I section outgoing line 19,20,21frequency ABC	1184H-1185H	R	2	HZ	float	
494	I section outgoing line 22,23,24 frequency ABC	1186H-1187H	R	2	HZ	float	
495	II section outgoing line 13,14,15 frequency ABC	1188H-1189H	R	2	HZ	float	
496	II section outgoing line 16,17,18 frequency ABC	118AH-118BH	R	2	HZ	float	
497	II section outgoing line 19,20,21 frequency ABC	118CH-118DH	R	2	HZ	float	
498	II section outgoing line 22,23,24 frequency ABC	118EH-118FH	R	2	HZ	float	
499	I section outgoing line 13,14,15 active ABC	1190H-1191H	R	2	kW	float	
500	I section outgoing line 16,17,18 active ABC	1192H-1193H	R	2	kW	float	
501	I section outgoing line 19,20,21 active ABC	1194H-1195H	R	2	kW	float	
502	I section outgoing line 22,23,24 active ABC	1196H-1197H	R	2	kW	float	
503	II section outgoing line 13,14,15 active ABC	1198H-1199H	R	2	kW	float	
504	II section outgoing line 16,17,18 active ABC	119AH-119BH	R	2	kW	float	
505	II section outgoing line 19,20,21 active ABC	119CH-119DH	R	2	kW	float	
506	II section outgoing line 22,23,24 active ABC	119EH-119FH	R	2	kW	float	
507	I section outgoing line 13,14,15 reactive ABC	11A0H-11A1H	R	2	kvar	float	
508	I section outgoing line 16,17,18 reactive ABC	11A2H-11A3H	R	2	kvar	float	
509	I section outgoing line 19,20,21 reactive ABC	11A4H-11A5H	R	2	kvar	float	
510	I section outgoing line 22,23,24 reactive ABC	11A6H-11A7H	R	2	kvar	float	
511	II section outgoing line 13,14,15 reactive ABC	11A8H-11A9H	R	2	kvar	float	
512	II section outgoing line 16,17,18 reactive ABC	11AAH-11ABH	R	2	kvar	float	
513	II section outgoing line 19,20,21 reactive ABC	11ACH-11ADH	R	2	kvar	float	
514	II section outgoing line 22,23,24 reactive ABC	11AEH-11AFH	R	2	kvar	float	
515	I section outgoing line 13,14,15 apparent ABC	11B0H-11B1H	R	2	kVA	float	
516	I section outgoing line 16,17,18 apparent ABC	11B2H-11B3H	R	2	kVA	float	

517	I section outgoing line 19,20,21 apparent ABC	11B4H-11B5H	R	2	kVA	float	
518	I section outgoing line 22,23,24 apparent ABC	11B6H-11B7H	R	2	kVA	float	
519	II section outgoing line 13,14,15 apparent ABC	11B8H-11B9H	R	2	kVA	float	
520	II section outgoing line 16,17,18 apparent ABC	11BAH-11BBH	R	2	kVA	float	
521	II section outgoing line 19,20,21 apparent ABC	11BCH-11BDH	R	2	kVA	float	
522	II section outgoing line 22,23,24 apparent ABC	11BEH-11BFH	R	2	kVA	float	
523	I section outgoing line 13,14,15 factor ABC	11C0H-11C1H	R	2	NONE	float	
524	I section outgoing line 16,17,18 factor ABC	11C2H-11C3H	R	2	NONE	float	
525	I section outgoing line 19,20,21 factor ABC	11C4H-11C5H	R	2	NONE	float	
526	I section outgoing line 22,23,24 factor ABC	11C6H-11C7H	R	2	NONE	float	
527	II section outgoing line 13,14,15 factor ABC	11C8H-11C9H	R	2	NONE	float	
528	II section outgoing line 16,17,18 factor ABC	11CAH-11CBH	R	2	NONE	float	
529	II section outgoing line 19,20,21 factor ABC	11CCH-11CDH	R	2	NONE	float	
530	II section outgoing line 22,23,24 factor ABC	11CEH-11CFH	R	2	NONE	float	
531	I section outgoing line 13 active energy A	11D0H-11D1H	R	2	0.01kWh	Uint32	
532	I section outgoing line 14 active energy B	11D2H-11D3H	R	2	0.01kWh	Uint32	
533	I section outgoing line 15 active energy C	11D4H-11D5H	R	2	0.01kWh	Uint32	
534	I section outgoing line 16 active energy A	11D6H-11D7H	R	2	0.01kWh	Uint32	
535	I section outgoing line 17 active energy B	11D8H-11D9H	R	2	0.01kWh	Uint32	
536	I section outgoing line 18 active energy C	11DAH-11DBH	R	2	0.01kWh	Uint32	
537	I section outgoing line 19 active energy A	11DCH-11DDH	R	2	0.01kWh	Uint32	
538	I section outgoing line 20 active energy B	11DEH-11DFH	R	2	0.01kWh	Uint32	
539	I section outgoing line 21 active energy C	11E0H-11E1H	R	2	0.01kWh	Uint32	
540	I section outgoing line 22 active energy A	11E2H-11E3H	R	2	0.01kWh	Uint32	
541	I section outgoing line 23 active energy B	11E4H-11E5H	R	2	0.01kWh	Uint32	
542	I section outgoing line 24 active energy C	11E6H-11E7H	R	2	0.01kWh	Uint32	
543	II section outgoing line 13 active energy A	11E8H-11E9H	R	2	0.01kWh	Uint32	
544	II section outgoing line 14 active energy B	11EAH-11EBH	R	2	0.01kWh	Uint32	
545	II section outgoing line 15 active energy C	11ECH-11EDH	R	2	0.01kWh	Uint32	
546	II section outgoing line 16 active energy A	11EEH-11EFH	R	2	0.01kWh	Uint32	

547	II section outgoing line 17 active energy B	11F0H-11F1H	R	2	0.01kWh	Uint32	
548	II section outgoing line 18 active energy C	11F2H-11F3H	R	2	0.01kWh	Uint32	
549	II section outgoing line 19 active energy A	11F4H-11F5H	R	2	0.01kWh	Uint32	
550	II section outgoing line 20 active energy B	11F6H-11F7H	R	2	0.01kWh	Uint32	
551	II section outgoing line 21 active energy C	11F8H-11F9H	R	2	0.01kWh	Uint32	
552	II section outgoing line 22 active energy A	11FAH-11FBH	R	2	0.01kWh	Uint32	
553	II section outgoing line 23 active energy B	11FCH-11FDH	R	2	0.01kWh	Uint32	
554	II section outgoing line 24 active energy C	11FEH-11FFH	R	2	0.01kWh	Uint32	
555	I section outgoing line 13 reactive energy A	1200H-1201H	R	2	0.01kvarh	Uint32	
556	I section outgoing line 14 reactive energy B	1202H-1203H	R	2	0.01kvarh	Uint32	
557	I section outgoing line 15 reactive energy C	1204H-1205H	R	2	0.01kvarh	Uint32	
558	I section outgoing line 16 reactive energy A	1206H-1207H	R	2	0.01kvarh	Uint32	
559	I section outgoing line 17 reactive energy B	1208H-1209H	R	2	0.01kvarh	Uint32	
560	I section outgoing line 18 reactive energy C	120AH-120BH	R	2	0.01kvarh	Uint32	
561	I section outgoing line 19 reactive energy A	120CH-120DH	R	2	0.01kvarh	Uint32	
562	I section outgoing line 20 reactive energy B	120EH-120FH	R	2	0.01kvarh	Uint32	
563	I section outgoing line 21 reactive energy C	1210H-1211H	R	2	0.01kvarh	Uint32	
564	I section outgoing line 22 reactive energy A	1212H-1213H	R	2	0.01kvarh	Uint32	
565	I section outgoing line 23 reactive energy B	1214H-1215H	R	2	0.01kvarh	Uint32	
566	I section outgoing line 24 reactive energy C	1216H-1217H	R	2	0.01kvarh	Uint32	
567	II section outgoing line13 reactive energy A	1218H-1219H	R	2	0.01kvarh	Uint32	
568	II section outgoing line14 reactive energy B	121AH-121BH	R	2	0.01kvarh	Uint32	
569	II section outgoing line15 reactive energy C	121CH-121DH	R	2	0.01kvarh	Uint32	
570	II section outgoing line16 reactive energy A	121EH-121FH	R	2	0.01kvarh	Uint32	
571	II section outgoing line17 reactive energy B	1220H-1221H	R	2	0.01kvarh	Uint32	
572	II section outgoing line18 reactive energy C	1222H-1223H	R	2	0.01kvarh	Uint32	
573	II section outgoing line19 reactive energy A	1224H-1225H	R	2	0.01kvarh	Uint32	
574	II section outgoing line20 reactive energy B	1226H-1227H	R	2	0.01kvarh	Uint32	
575	II section outgoing line21 reactive energy C	1228H-1229H	R	2	0.01kvarh	Uint32	
576	II section outgoing line22 reactive energy A	122AH-122BH	R	2	0.01kvarh	Uint32	

577	II section outgoing line23 reactive energy B	122CH-122DH	R	2	0.01kvarh	Uint32	
578	II section outgoing line24 reactive energy C	122EH-122FH	R	2	0.01kvarh	Uint32	
579	I section outgoing line 13,14,15 active energy ABC	1230H-1231H	R	2	0.01kWh	Uint32	
580	I section outgoing line 16,17,18 active energy ABC	1232H-1233H	R	2	0.01kWh	Uint32	
581	I section outgoing line 19,20,21 active energy ABC	1234H-1235H	R	2	0.01kWh	Uint32	
582	I section outgoing line22,23,24 active energy ABC	1236H-1237H	R	2	0.01kWh	Uint32	
583	II section outgoing line13,14,15 active energy ABC	1238H-1239H	R	2	0.01kWh	Uint32	
584	II section outgoing line16,17,18 active energy ABC	123AH-123BH	R	2	0.01kWh	Uint32	
585	II section outgoing line19,20,21 active energy ABC	123CH-123DH	R	2	0.01kWh	Uint32	
586	II section outgoing line 22,23,24 active energy ABC	123EH-123FH	R	2	0.01kWh	Uint32	
587	I section outgoing line 13,14,15 reactive energy ABC	1240H-1241H	R	2	0.01kvarh	Uint32	
588	I section outgoing line 16,17,18 reactive energy ABC	1242H-1243H	R	2	0.01kvarh	Uint32	
589	I section outgoing line 19,20,21 reactive energy ABC	1244H-1245H	R	2	0.01kvarh	Uint32	
590	I section outgoing line 22,23,24 reactive energy ABC	1246H-1247H	R	2	0.01kvarh	Uint32	
591	II section outgoing line 13,14,15reactive energy ABC	1248H-1249H	R	2	0.01kvarh	Uint32	
592	II section outgoing line 16,17,18 reactive energy ABC	124AH-124BH	R	2	0.01kvarh	Uint32	
593	II section outgoing line 19,20,21reactive energy ABC	124CH-124DH	R	2	0.01kvarh	Uint32	
594	II section outgoing line 22,23,24reactive energy ABC	124EH-124FH	R	2	0.01kvarh	Uint32	
595	A phase total current harmonic content (I section outgoing line 13)	130AH	R	1	0.01%	Uint16	
596	A phase current 2-31 times harmonic content (I section outgoing line 13)	130BH-1328H	R	1	0.01%	Uint16	
597	B phase total current harmonic content (I section outgoing line 14)	1329H	R	1	0.01%	Uint16	
598	B phase current 2-31 times harmonic content (I section outgoing line 14)	132AH-1347H	R	1	0.01%	Uint16	
599	C phase total current harmonic content (I section outgoing line 15)	1348H	R	1	0.01%	Uint16	
600	C phase current 2-31 times harmonic content (I section outgoing line 15)	1349H-1366H	R	1	0.01%	Uint16	
601	A phase total current harmonic content (I section outgoing line 16)	1367H	R	1	0.01%	Uint16	
602	A phase current 2-31 times harmonic content (I section outgoing line 16)	1368H-1385H	R	1	0.01%	Uint16	
603	B phase total current harmonic content (I section outgoing line 17)	1386H	R	1	0.01%	Uint16	

604	B phase current 2-31 times harmonic content (I section outgoing line 17)	1387H-13A4H	R	1	0.01%	Uint16	
605	C phase total current harmonic content (I section outgoing line 18)	13A5H	R	1	0.01%	Uint16	
606	C phase current 2-31 times harmonic content (I section outgoing line 18)	13A6H-13C3H	R	1	0.01%	Uint16	
607	A phase total current harmonic content (I section outgoing line 19)	13C4H	R	1	0.01%	Uint16	
608	A phase current 2-31 times harmonic content (I section outgoing line 19)	13C5H-13E2H	R	1	0.01%	Uint16	
609	B phase total current harmonic content (I section outgoing line 20)	13E3H	R	1	0.01%	Uint16	
610	B phase current 2-31 times harmonic content (I section outgoing line 20)	13E4H-1401H	R	1	0.01%	Uint16	
611	C phase total current harmonic content (I section outgoing line 21)	1402H	R	1	0.01%	Uint16	
612	C phase current 2-31 times harmonic content (I section outgoing line 21)	1403H-1420H	R	1	0.01%	Uint16	
613	A phase total current harmonic content (I section outgoing line 22)	1421H	R	1	0.01%	Uint16	
614	A phase current 2-31 times harmonic content (I section outgoing line 22)	1422H-143FH	R	1	0.01%	Uint16	
615	B phase total current harmonic content (I section outgoing line 23)	1440H	R	1	0.01%	Uint16	
616	B phase current 2-31 times harmonic content (I section outgoing line 23)	1441H-145EH	R	1	0.01%	Uint16	
617	C phase total current harmonic content (I section outgoing line 24)	145FH	R	1	0.01%	Uint16	
618	C phase current 2-31 times harmonic content (I section outgoing line 24)	1460H-147DH	R	1	0.01%	Uint16	
619	A phase total current harmonic content (II section outgoing line 13)	147EH	R	1	0.01%	Uint16	
620	A phase current 2-31 times harmonic content (II section outgoing line 13)	147FH-149CH	R	1	0.01%	Uint16	
621	B phase total current harmonic content (II section outgoing line 14)	149DH	R	1	0.01%	Uint16	
622	B phase current 2-31 times harmonic content (II section outgoing line 14)	149EH-14BBH	R	1	0.01%	Uint16	
623	C phase total current harmonic content (II section outgoing line 15)	14BCH	R	1	0.01%	Uint16	
624	C phase current 2-31 times harmonic content (II section outgoing line 15)	14BDH-14DAH	R	1	0.01%	Uint16	
625	A phase total current harmonic content (II section outgoing line 16)	14DBH	R	1	0.01%	Uint16	
626	A phase current 2-31 times harmonic content (II section outgoing line 16)	14DCH-4F9H	R	1	0.01%	Uint16	
627	B phase total current harmonic content (II section outgoing line 17)	14FAH	R	1	0.01%	Uint16	
628	B phase current 2-31 times harmonic content (II section outgoing line 17)	14FBH-1518H	R	1	0.01%	Uint16	
629	C phase total current harmonic content (II section outgoing line 18)	1519H	R	1	0.01%	Uint16	
	C phase current 2-31 times harmonic content					Uint16	

630	(II section outgoing line 18)	151AH-1537H	R	1	0.01%		
631	A phase total current harmonic content (II section outgoing line 19)	1538H	R	1	0.01%	Uint16	
632	A phase current 2-31 times harmonic content (II section outgoing line 19)	1539H-1556H	R	1	0.01%	Uint16	
633	B phase total current harmonic content (II section outgoing line 20)	1557H	R	1	0.01%	Uint16	
634	B phase current 2-31 times harmonic content (II section outgoing line 20)	1558H-1575H	R	1	0.01%	Uint16	
635	C phase total current harmonic content (II section outgoing line 21)	1576H	R	1	0.01%	Uint16	
636	C phase current 2-31 times harmonic content (II section outgoing line 21)	1577H-1594H	R	1	0.01%	Uint16	
637	A phase total current harmonic content (II section outgoing line 22)	1595H	R	1	0.01%	Uint16	
638	A phase current 2-31 times harmonic content (II section outgoing line 22)	1596H-15B3H	R	1	0.01%	Uint16	
639	B phase total current harmonic content (II section outgoing line 23)	15B4H	R	1	0.01%	Uint16	
640	B phase current 2-31 times harmonic content (II section outgoing line 23)	15B5H-15D2H	R	1	0.01%	Uint16	
641	C phase total current harmonic content (II section outgoing line 24)	15D3H	R	1	0.01%	Uint16	
642	C phase current 2-31 times harmonic content (II section outgoing line 24)	15D4H-15F1H	R	1	0.01%	Uint16	
643	I section total current harmonic content (outgoing line 13-outgoing line24)A-B-C	1602H-160DH	R	1	0.01%	Uint16	
644	I section total current harmonic content (outgoing line 13-outgoing line24)A-B-C	160EH-1619H	R	1	0.01%	Uint16	

Remote signalling

Serial no.	Variate	ADD	Read& write	Remark
1	The first way on-off input	0	R	0 invalid 1 valid
2	The second way on-off input	1	R	Ditto
3	The third way on-off input	2	R	Ditto
4	The fourth way on-off input	3	R	Ditto
5	The fifth way on-off input	4	R	Ditto
6	The sixth way on-off input	5	R	Ditto
7	The seventh way on-off input	6	R	Ditto
8	The eighth way on-off input	7	R	Ditto
9	The ninth way on-off input	8	R	Ditto
10	The tenth way on-off input	9	R	Ditto
11	The eleventh way on-off input	10	R	Ditto
12	The twelfth way on-off input	11	R	Ditto

13	The thirteenth way on-off input	12	R	Ditto
14	The fourteenth way on-off input	13	R	Ditto
15	The fifteenth way on-off input	14	R	Ditto
16	The sixteen way on-off input	15	R	Ditto
17	The fourteenth way on-off input	16	R	Ditto
18	The eighteenth way on-off input	17	R	Ditto
19	The nineteenth way on-off input	18	R	Ditto
20	The twentieth way on-off input	19	R	Ditto
21	The twenty-first way on-off input	20	R	Ditto
22	The twenty-second way on-off input	21	R	Ditto
23	The twenty-third way on-off input	22	R	Ditto
24	The twenty-fourth way on-off input	23	R	Ditto
25	The twenty-fifth way on-off input	24	R	Ditto
26	The twenty-sixth way on-off input	25	R	Ditto
27	The twenty-seventh way on-off input	26	R	Ditto
28	The twenty-eighth way on-off input	27	R	Ditto
29	The twenty-ninth way on-off input	28	R	Ditto
30	The thirtieth way on-off input	29	R	Ditto
31	The thirty-first way on-off input	30	R	Ditto
32	The thirty-second way on-off input	31	R	Ditto
33	The thirty-third way on-off input	32	R	Ditto
34	The thirty-fourth way on-off input	33	R	Ditto
35	The thirty-fifth way on-off input	34	R	Ditto
36	The thirty-sixth way on-off input	35	R	Ditto
37	The thirty-seventh way on-off input	36	R	Ditto
38	The thirty-eighth way on-off input	37	R	Ditto
39	The thirty-ninth way on-off input	38	R	Ditto
40	The fortieth way on-off input	39	R	Ditto
41	The forty-first way on-off input	40	R	Ditto
42	The forty-second way on-off input	41	R	Ditto
43	The forty-third way on-off input	42	R	Ditto
44	The forty-fourth way on-off input	43	R	Ditto
45	The forty-fifth way on-off input	44	R	Ditto
46	The forty-sixth way on-off input	45	R	Ditto
47	The forty-seventh way on-off input	46	R	Ditto
48	The forty-eighth way on-off input	47	R	Ditto

7 Matters need attention

7.1 The device should be installed in a dry, clean place away from heat source and strong electromagnetic field.

7.2 Attention should be paid to the phase sequence and polarity of AC voltage and current when the device is connected, otherwise the measurement will be inaccurate.

7.3 The current input must use CT, and the variable ratio parameters of incoming CT must be set through communication.

7.4 The accuracy of CT affects the measurement accuracy of this device.The angular difference of CT will affect the measuring accuracy of power and electric energy.

7.5 A 2A fuse should be installed for direct access systems without PT.

7.6 The CT grounding terminal of the current input on the device should be led to the grounding terminal separately. It is not allowed to connect the current input grounding terminal in parallel and then lead to the grounding terminal on the device.

7.7 Communication cable should use shielded twisted pair.

8 Common fault diagnosis and troubleshooting methods

8.1 The measurement of the device is not accurate

∗Check whether the wiring of voltage and current is correct, and whether the incoming and outgoing lines of current input are correct;

∗Check whether the CT setting of the device corresponds to the actual CT used externally;

8.2 The voltage and current are measured correctly, but the power is not measured accurately.

∗Check whether the current input direction is correct;

∗Check whether the corresponding phase of each current loop is correct;The outgoing circuit shall be adjusted according to actual access.

8.3 Abnormal communication

∗Check whether the communication cable is connected normally;

∗Check whether the A and B terminals of communication are interlaced;

∗Check whether the address of the device is set correctly and the communication baud rate is set correctly;

∗When the communication of multiple devices is abnormal, first try whether the single communication is normal;

8.4 There is incoming voltage, current, and power, but electricity has no value.

∗Check the CT ratio setting of the incoming line.

8.5 The current of AMC16Z-ZD has a value when the load has no current.

∗Adjust the zero value of AMC16Z-ZD current.(the zero point of dc hall sensor is not consistent, the difference is large, need to be adjusted)

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