ABOUT CHINT

CHINT A leading global provider of smart energy solutions

CHINT was established 38 years ago in 1984 and built from the capital of approximately 8,000 US dollars. With our rapid development these years, CHINT has become the world's leading intelligent energy solutions provider for the whole industrial chain with the most complete product ranges. In 2021, our annual sales revenue exceeded 16.1 billion dollars and total assets of more than 16.2 billion.

Over two decades of global expansion, our business network covers more than 140 countries and regions worldwide in business industries of low-voltage electric, power transmission and distribution, smart technology, energy instruments and meters, green energy, solar and more. CHINT has more than 40,000 employees worldwide, creating more than 200,000 jobs in the industrial chains.

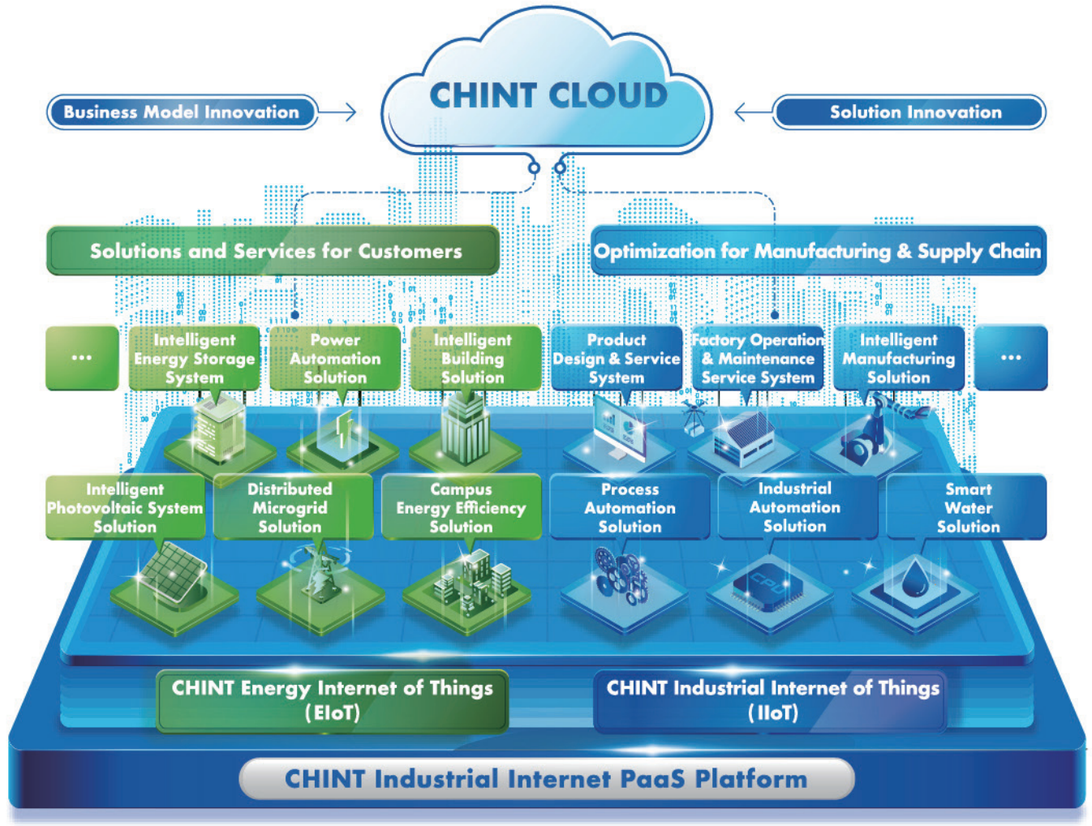
As the market localization progresses steadily, CHINT Global further establishes its supply chain through business integration and industrial upgrade. Optimizing the service system and project financing, providing innovatively integrated technical services for the global energy market, and a flexible working business model.energy, intelligent manufacturing and digital technology, CHINT has adopted "One Cloud & Two Nets" as the business strategy, takes "CHINT Cloud" as the carrier of intelligent technology and data application, and takes the lead in building the energy Internet of things (EIoT) and industrial Internet of things platforms (IIoT).

Focusing on the energy system of supply, storage, transmission, distribution and consumption, CHINT has core businesses of clean energy, energy distribution, big data and energy value-added services. Furthermore, CHINT's pillar businesses include photovoltaic equipment, energy storage, power transmission & distribution, low-voltage apparatuses, intelligent terminals, software development and control automation. By developing into a platform-based enterprise, CHINT provides a package of energy solutions for public institutions, industrial & commercial users and end-users, by building a regional smart energy operation ecosphere.

Main Businesses

- Clean Energy
- Low-voltage Apparatus
- Power Transmission and Distribution
- Instrumentation and Apparatus
- Smart Home
- Intelligent Building
- Intelligent Manufacturing
- Industry Automation
- Smart Heating
- Smart Water
- Home Electrical Apparatus
- Energy Efficiency Management

ONE CLOUD & TWO NETS STRATEGY



Energy system optimization is an inevitable trend against the background of resource shortage, environmental pollution and climate change – three challenges faced by global energy development. To keep in line with the trend, CHINT actively implements the business strategy of One Cloud & Two Nets, continuously promotes the deep integration of big data, IoT, AI and manufacturing industry in stages to become a platform-based enterprise, and leads the new direction of industry development.

As a medium of smart technology and data applications, CHINT Cloud connects corporate in-house manufacturing with operation and management data, realizing digital applications and services both internally and externally.

As a user-centric multi-energy complementary smart energy system, CHINT EIoT provides a package of energy solutions for governments, industrial & commercial users and end users. Its business includes Smart Energy Efficiency, Smart Power, Smart Home and Smart Clean Energy, etc.

As a smart manufacturing system based on corporate digital transformation, CHINT IIoT constitutes a flexible, high-efficiency and intelligent industrial system. Its business includes Intelligent Manufacturing, Intelligent Industry, Smart Water, Smart Heating, etc.

GLOBAL FOOTPRINT

4 National R&D Centers: North America, Europe, Asia Pacific, North Africa

6 International Marketing Territories: Asia Pacific, Western Asia and Africa, Europe, Latin America, North America, China

14 Manufacturing Bases: China (Wenzhou, Hangzhou, Shanghai, Jiaxing, Xianyang, Jinan, Yancheng), Thailand, Singapore, Vietnam, Malaysia, Egypt, Algeria and Cambodia

20+ International Logistics Centers

2300+ Sales Companies

GLOBAL CAPACITY LAYOUT

The industrial manufacturing bases are mainly located in Wenzhou, Hangzhou, Shanghai, Jiaxiang, Xianyang and Yancheng. Additionally, CHINT has set up factories in Thailand, Singapore, Vietnam, Malaysia, Egypt, Cambodia etc.


Wenzhou Manufacturing Base


Hangzhou Manufacturing Base


Shanghai Manufacturing Base


Jiaxing Manufacturing Base

Xianyang Manufacturing Base


Jinan Cable Manufacturing Base


Yancheng New Energy Manufacturing Base

Wuhan Manufacturing Base

Singapore Complete Electric Equipment Manufacturing Base

Vietnam Manufacturing Base


Malaysia Manufacturing Base


Egypt Manufacturing Base

Algerian Manufacturing Base


Cambodia Manufacturing Base

Thailand Solar Power Manufacturing Base

R&D, QUALITY, SALES, LOGISTICS

Main Advantages

Global R&D System

CHINT has established national R&D centers in North America, Europe, Asia Pacific, North Africa and other areas. We have explored the mode of Industry-University Research Institute Collaboration and Integration together with the universities and research institutions worldwide so as to integrate the global innovation resources and promote corporate R&D innovation and talent cultivation.

24 research institutes

The average annual R&D investment accounts for 4-12% of the revenue

Over 6000 patents in total

Global Certification

The products have passed the standards and specifications in various regions around the world and obtained numerous international certifications

Honors

- No. 1 in China's Top 100 Private Enterprises with Social Responsibility in 2021
- No. 92 in 2021 China's Top 500 Private Enterprises
- No. 244 in 2021 Top 500 Chinese Enterprises
- The intelligent manufacturing factory of low-voltage electrical appliances was selected as the national 2021 Intelligent Manufacturing Demonstration Factory

Integrated Vertical R&D

By gathering the global industry elites to Provide safe and stable energy-saving green and advanced electric products.

5% At least 5% of revenue is invested in research and development

Great Quality System

Ensuring flaw-fraw-free and trouble-free products, the multi-dimensional and multilevel control is conducted through procurement, inspection, quality control and certification.

One-stop Services

CHINT's concept is that it is not difficult to fulfill a high-quality logistics distribution at one time, while it is difficult to stay as accurate and prompt as the first-time. High-efficiency and high-precision accuracy are our requirement.

48-Hour Response

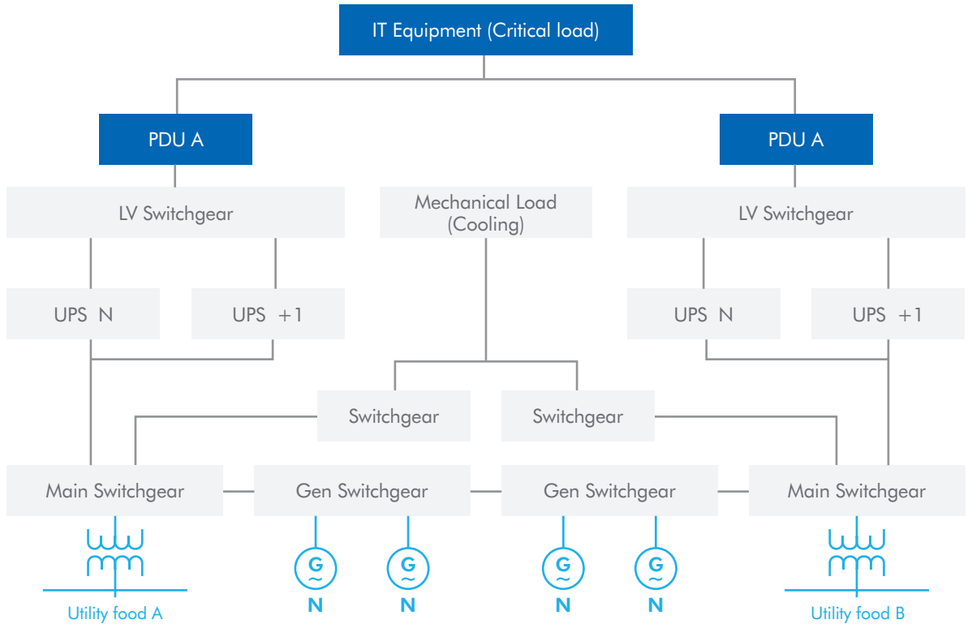
Providing end-to-end one-stop services for customers with complains, business consulting and technical support by solving problems immediately and including any possible problems in advance.

48 hour Global Services

1.0 Applications

The world is entering the digital era at a faster speed than expected. Digital priority has become the core of the new needs of enterprises after the pandemic. More than 86% of the enterprises in the world will carry out digital transformation. By 2024, more than 51% of the global IT budget will be put in digital innovation/ transformation, while for China, this number will be over 70%. AI, cloud computing, 5G, streaming media and IOT drive the demand for larger data storage, stronger data computing ability and faster data interaction.
As the key infrastructure and physical carrier in the digital era, data center has gradually changed from cost center to service center, from supporting business development to driving business development, and has become the accelerator of business innovation.
Data center construction is a complex system engineering. From initial design and planning to the project construction, and then to the installation of supporting facilities and later operation and maintenance services, every components need to be connected and complement each other.
New technologies, new services and new applications are profoundly affecting the construction mode and O&M mode of the new generation cloud data center, which poses new challenges to the design concept, construction standards, delivery speed, network structure

Data center topology diagram



Value to the customer

Safety

The product has passed IEC 61439-2 type test and seismic test to ensure the safety of personnel. The high breaking capability can break 15kA fault currents

Customization

Flexible cables entry/exit type" and modular structure layout to meet customization needs

Durability

IP31 and corrosion protection process allow the PDU to be used outside the equipment room

2.0 Advantages

MCCB 50kA
MCB 15kA

A. High breaking capability.

Using the reliable and safe busbar system scheme to ensure the safe operation of user load

Modular design

B. Modular design

- Each functional unit is separated from each other
- Multilevel layout for easy daily operation
- Flexible entry and exit scheme
- Independent installation space for BMS

144 Number of outgoing circuits

C. High power capacity

144 number of outgoing circuits, Saving equipment room space

Live swappable

D. Live-Swappable

Outgoing circuits :
- Common MCB compatible
- Support live plug, remove and replace components

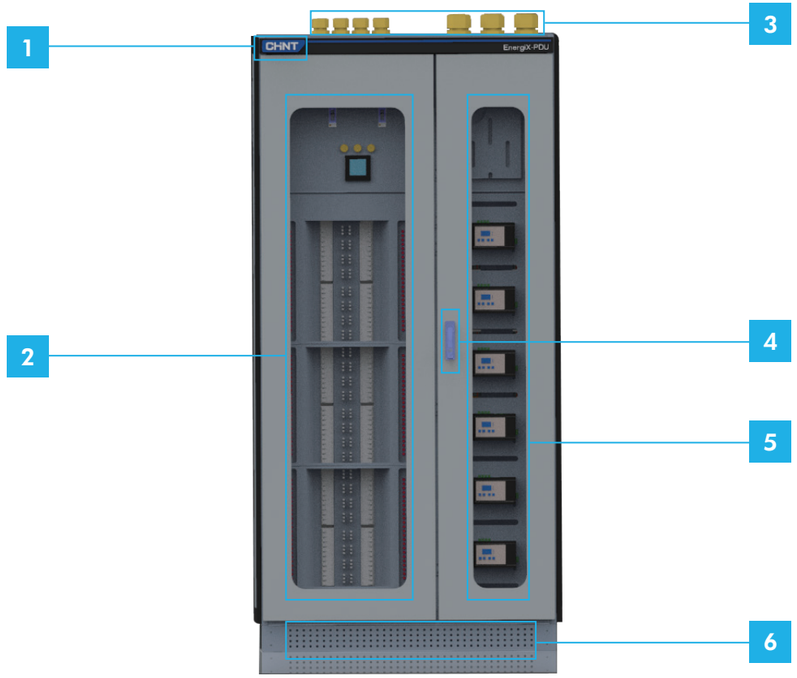
BCM & EPMS

E. Smarter EnergiX-P40

Optional branch control monitoring system,which collect every circuits electrical parameter

3.0

Product introduction



1 New label

- Delicate and beautiful

2 1850*445 main window

- Observe MCB ON/OFF status
- Observe meter parameter

3 Using cable gland

- IP 31
- Suitable for different sizes of cables

4 Lock with padlock

- Meet data center requirements
- Prevent non-professionals from misoperation

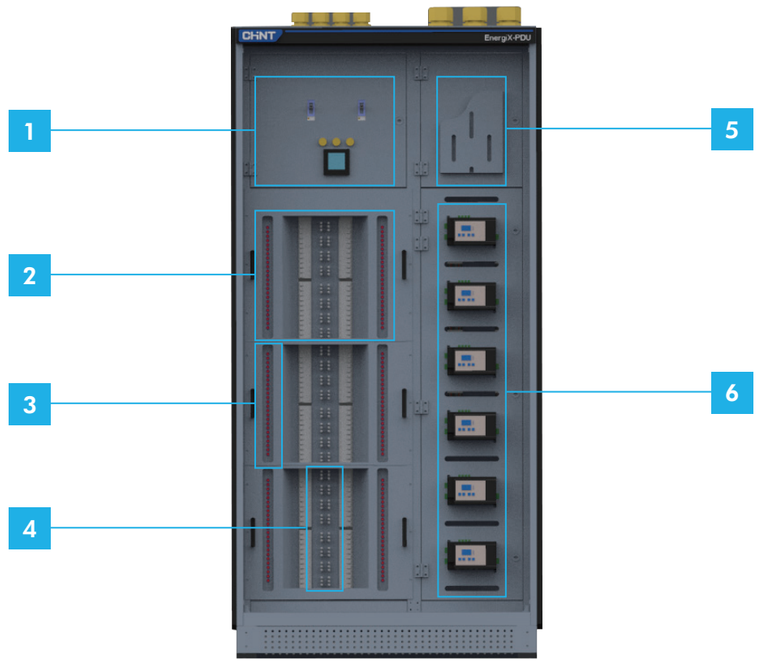
5 1850*205 window

- Observe BMS parameter

6 Base with a heat sink (100mm)

3.0

Product introduction



1 Door panel opening design

- Operate the circuit breaker and meter without opening the inner door

2 Detachable door panel

- Meet the requirements of open door IP20

3 Lights (Status ON/OFF)

- Observe MCB ON/OFF status

4 Circuits number label

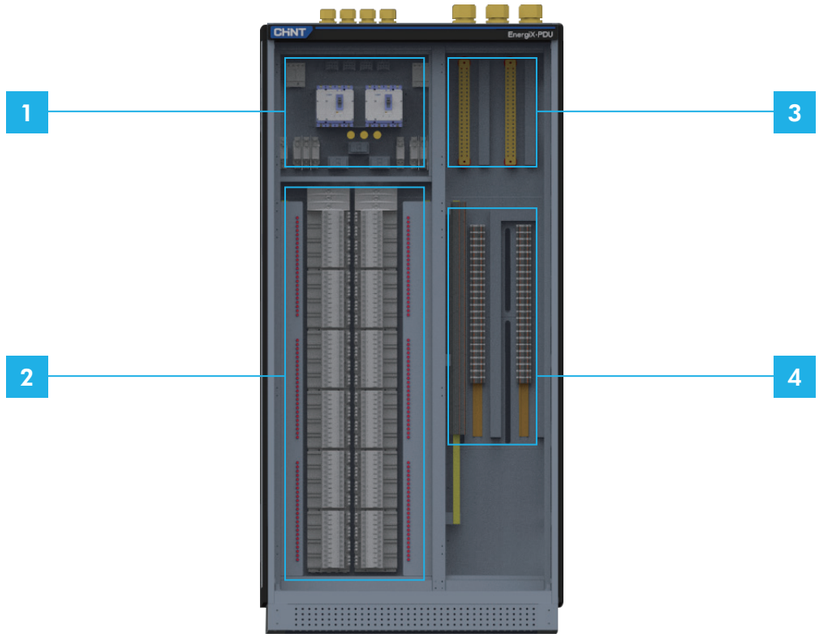
5 File cover

6 Branch circuit power monitoring

- Supports 144 circuits electrical monitoring
- With local display, remote transmission function

3.0

Product introduction



1	NM8N MCCB

- ICU=50kA

2	Double busbar system design

- Live-Swappable
- Icu=5/10/15kA

3	N & PE bar

4	Terminal

- Using UK40 terminal

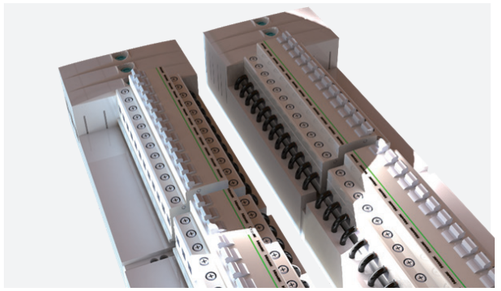
3.0

Product introduction

Busbar System

The distribution structure of the system is compact. It is easy to install and replace components, which significantly reduces the space requirement for installing PDUs in the equipment room.

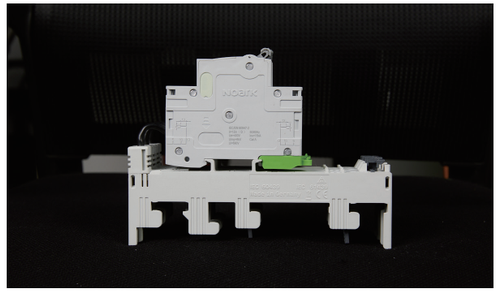
- The busbar system is the ideal solution for distribution boards with a rated current up to 360 A.
- The installation height of just 145 mm allows a particularly compact system to be realized
- The system breaking capacity up to 30kA to protect IT loads from fault currents.
- Hot swappable busbar system, meet the requirements for quick operation and maintenance.



1 Busbar System

2 Hot swappable busbar system

3 Quick installation and maintenance



4 Installation height 145mm

Component

MCB —— NB1-63H

- Miniature Circuit Breakers according to IEC/EN 60898-1、IEC/EN 60947-2、UL1077
- Rated short circuit breaking capacity 10 kA
- 1 up to 4-pole versions
- Tripping characteristics B, C, D
- Rated current up to 63 A
- Rated operational voltage 230/400~240/415AC, 110/125 DC

MCB —— Ex9BH (A CHINT company brand)

- Miniature Circuit Breakers according to IEC/EN 60898-1 and IEC/EN 60947-2 (partially)
- Rated short circuit breaking capacity 15 kA
- 1 up to 4-pole versions
- Tripping characteristics B, C, D
- Rated current up to 63 A
- Rated operational voltage 240/415 V AC, 48 V DC (per pole)

SPD —— NU6-III

- Electric ratings: Single phase power distribution and control
- System of AC50Hz, 230V
- Short circuit current: Up to 10kA
- Apparatus: Protect electric system and on-loading electrical
- Apparatus from lightening and instantaneous over-voltage
- Standard：IEC61643-1, EN61643-11

Power Quality & Energy Meter

- It can measure three phase current, voltage, active/reactive power, power factor, frequency, positive/ negative active energy, four-quadrant reactive energy
- With the standard RS-485 communication interface, adopting the standard ModBus-RTU communication protocol and the baud rate can be set with switch quantity input function
- Function extension: Four-way analog quantity output function; four-way switching quantity output function “remote-communication” and “remote control” functions
- Parameters such as the current/voltage ratio, indication mode for electrical quantity, the of the meter, electric quantity display mode, communication address of the meter, baud rate, transmitting output object, transmitting output range, alarming object, alarming upper/lower limit, etc. can be randomly programmed and set

Intelligent Branch Circuit Power Monitoring System

- Measurement accuracy according tolEC62053-22 Cl 0.5S
- Measure up to 2 main circuits up to 31st harmonics measurements
- Measure up to 24 single phase circuits or measure up to 8 three phase sub-circuit metering
- Able to combine either three phase or single phase according to your need
- 4 relays output
- Optional with 2nd Modbus output
- Designed to suit with split core current transformer with 333mV CT input (CT range from 100A to 3000A)

EnergiX-P40 catalogue

3.0

Product introduction

IBCPM Characteristics

Communication / Interface	
RS-485: Modbus-RTU (Default) / Optional Modbus TCP	
Physical interface	RS-485
Communication speed	Up to 38.4 kbps
Communication protocol	Modbus-RTU / Optional Modbus TCP
Measurement Parameters	
Power Quality Analysis	
Wave Sampling	128 samples/cycle
Harmonic	31st Harmonic (Main Circuits)
Alarm setting	Setpoint alarm and record
Real-time Data	Voltage, Current, Active power, Reactive Power, Apparent Power, Power Factor, Frequency, THD
Measurement Channel	2 main circuits and 24 channels sub circuits
Memory Record	
Memory	2MB
Setting	Load setting from previous saved file or set Rated range 50 - 600V (L-L) according to needs.
Accuracy	
Voltage/ Current	±0.2%
Re-,Active/Apparent power	±0.2%
Active Energy	±0.5%
Reactive Energy	±0.5%
Power Factor	±0.5%
Frequency	±0.1%
THD	1%
Unbalance	±0.5%

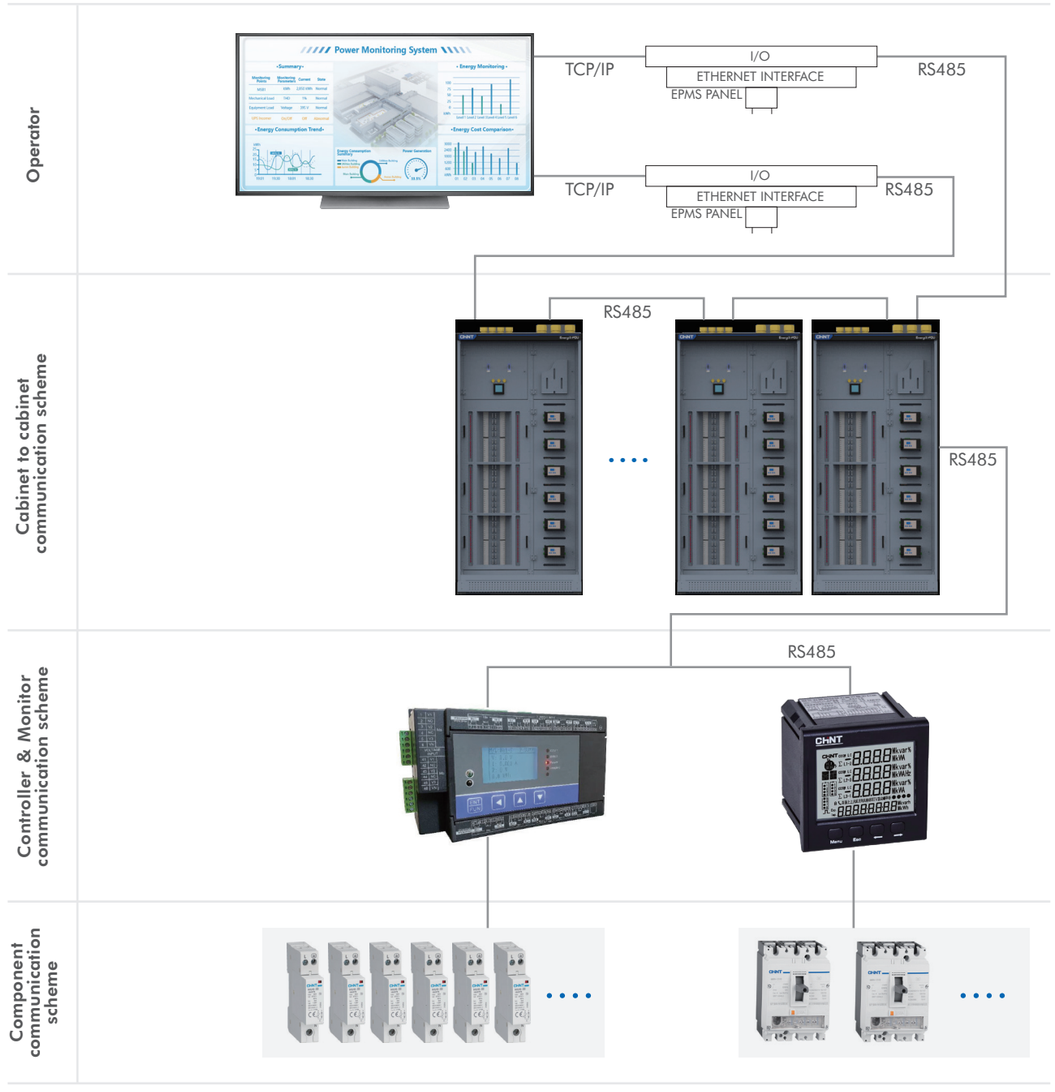
3.0

Product introduction

Power monitoring system

Chint provides complete loading background monitoring solution:
- Complete parameter information enables users to monitor of each circuit
- Wiring be done by serial，adding communication device easily
- Modbus communication protocol，Support customer to define communication device brand

Chint PMS communication scheme



3.0

Product introduction

Chint PMS parameter list

PDU BRANCH CIRCUIT MONITORING	DIGITAL POWER METER
1. Voltage (L1-N)	1. Voltage A-B RMS
2. Voltage (L2-N)	2. Voltage B-C RMS
3. Voltage (L3-N)	3. Voltage C-A RMS
4. Voltage (L1-L2)	4. Voltage L-L Average RMS
5. Voltage (L2-L3)	5. Voltage A-N RMS
6. Voltage (L1-L3)	6. Voltage B-N RMS
7. Current (L1)	7. Voltage C-N RMS
8. Current (L2)	8. Voltage L-L Average RMS
9. Current (L3)	9. Frequency
10. Frequency	10. Current A RMS
11. Real Power (kW)	11. Current B RMS
12. Reactive power (kVAr)	12. Current C RMS
13. Apparent power (KVA)	13. Current Average RMS
14. Power factor	14. Current A RMS Peak - Last Minute
15. Max power demand (kW) (L1)	15. Current B RMS Peak - Last Minute
16. Max power demand (kW) (L2)	16. Current C RMS Peak - Last Minute
17. Max power demand (kW) (L3)	17. Power Factor A
	18. Power Factor B
	19. Power Factor C
	20. Power Factor Total
	21. Real Power Total RMS
	22. Reactive Power Total RMS
	23. Apparent Power Total RMS
	24. Real Energy Total
	25. Reactive Energy Total
	26. Apparent Energy Total
	27. High Priority Alarm Present

TTA certification

intertek
Total Quality. Assured.

Laboratory Ref: S22C-016 **Project No. 220805001GZA**

Performance:

The performance of the assembly under testing was considered satisfactory and subject to the final analysis of the tests & review of the laboratory reports reference numbers S22C-016 by Intertek Testing & Certification Ltd., an ASTA Certificate will be issued in respect to these tests.

Chris Yu

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Tel: (86 20) 020-28209114 www.intertek.com

Email : chris.yu@intertek.com
Website : www.intertek.com.cn

Temperature rise limits

Comply with IEC 61439-2：2020-10.10

Degree of protection

Comply with IEC 61439-2：2020-10.3
- Form 2b
- IP31

Seismic report

Seismic report

Mechanical test

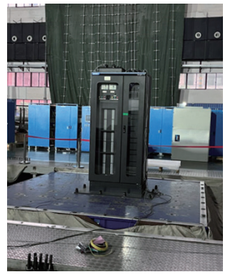
- Mechanical operation
- Degree of protection

Strength of material and parts

Comply with IEC 61439-2：2020-10.2
- Resistance to corrosion
- Properties of insulating materials
- Thermal stability
- Resistance lo abnormal heat and fire due to internal electric effects
- Lifting
- Mechanical operation

Icc Test

Comply with IEC 61439-2-2020-10.11
- Main busbar, Outgoing circuits15kA
- Incoming circuits 50kA



Seismic test

Comply with IEC 60068-3-3: 2019:
- Dielectric properties
- Electrical connectivity

5.0

Characteristics

Electrical characteristics		Mechanical Characteristics	
Rated current (In)	400A/200A	H*W*D(mm)	2200*1100*600
Rated power capacity(Pn)	277kVA@400V/138kVA@400V	Weight (Including device)	450kg
Rate voltage(Un) & (Ue)	230/400V±5%	Color	RAL 7021 mate
Rated insulation voltage(Ui)	690 Vac	Degree of protection (Closed/open doors)	IP 31/IP 20
Uimp	6kV	Front door type	Lexan window door
Icc MCCB/MCB	50kA/15kA	Weight (Including device)	Safety door w/ direct access to Branch Circuit Monitoring
Frequency	50/60Hz	Cables entry/exit	Top
Number of poles	3Ph+N+PE	Maintain type	Front
Operating temperature	0℃ -40℃	corrosion prevention	sea salt spray test
Storage temperature	-25℃ ~+70℃	Form	Form 2B
Display*	HMI	Hot swappable MCB	Y
Power Monitoring System*	Conventional or Branch circuit monitoring as required		

Standards		Communication/Monitoring*	
TTA certificate	IEC 61439-2	Metered values	1. Status ON/OFF 2. Voltage (V) 3. Current (A) 4. Apparent Power (kVA) 5. Real Power (kW) 6. Reactive Power (kVAr) 7. Power factor 8. Energy (kWhr) 9. Frequency
Seismic test	IEC 60068-3-3		
		Branch monitoring accuracy	≤3%
		Communication	Modbus RS485

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Empower the World

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A CHINT COMPANY

CHINT

Empower the World

EnergiX-P40 Catalogue