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 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







Distribution



· 0'itt

and Apparatu

Iome Electrico Apparatus

Smart Hom

Ø



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 EloT 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



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.



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.



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
- ing Demonstration Factory





Integrated Vertical R&D

By gathering the global industry S Ensuring flaw-fraw-free and elites to Provide safe and stable trouble-free products, the multi-dienergy-saving green and advanced mensional and multilevel control is electric products.



conducted through procurement, inspection, quality control and certification.

Great Quality System



• The intelligent manufacturing factory of low-voltage electrical appliances was selected as the national 2021 Intelligent Manufactur-



One-stop Services

GHINT'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 accurat High-efficiency and high-precision problems in advance. 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 immedie and prompt as the first-time. ately and including any possible





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%. Al, 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



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

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



Product introduction



Product introduction

EnergiX-P40 catalogue





1 New label

Delicate and beautiful

3 Using cable gland IP 31

Suitable for different sizes of cables

5 1850*205 window

Observe BMS parameter

2 1850*445 main window

- Observe MCB ON/OFF status
- Observe meter parameter

4 Lock with padlock

Meet data center requirements

Prevent non-professionals from misoperation

6 Base with a heat sink (100mm)

1 Door panel opening design

Operate the circuit breaker and meter without opening the inner door

3 Lights (Status ON/OFF)

Observe MCB ON/OFF status

5 File cover

2 Detachable door panel

Meet the requirements of open door IP20

4 Circuits number label

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

Product introduction

EnergiX-P40 catalogue

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.

Busbar System 1

Quick installation and maintenance

Component

MCB — NB1-63H

- Rated short circuit breaking capacity 10 kA
- 1 up to 4-pole versions
- Tripping characteristics B, C, D
- Rated current up to 63 A

9 | CHINT

2 Hot swappable busbar system

4 Installation height 145mm

Miniature Circuit Breakers according to IEC/EN 60898-1、IEC/EN 60947-2、UL1077

Rated operational voltage 230/400~240/415AC, 110/125 DC

Product introduction

Product introduction

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 toIEC62053-22 CI 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)

3.0

IBCPM Characteristics

Communication / Interface					
KS-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					
/oltage/ 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%				
Jnbalance	±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

EnergiX-P40 catalogue

Product introduction

Chint PMS parameter list

PDU BRANCH CIRCUIT MONITORING		
1. Voltage (L1-N)	1.	
2. Voltage (L2-N)	2.	
3. Voltage (L3-N)	3.	
4. Voltage (L1-L2)	4.	
5. Voltage (L2-L3)	5.	
6. Voltage (L1-L3)	6.	
7. Current (L1)	7.	
8. Current (L2)	8.	
9. Current (L3)	9.	
10. Frequency	10	
11. Real Power (kW)	11	
12. Reactive power (kVAr)	12	
13. Apparent power (KVA)	13	
14. Power factor	14	
15. Max power demand (kW) (L1)	15	
16. Max power demand (kW) (L2)	16	
17. Max power demand (kW) (L3)	17	
	18	
	19	
	20	
	21	
	22	
	23	
	24	
	25	
	26	

IGITAL POWER METER

- Voltage A-B RMS
- Voltage B-C RMS
- Voltage C-A RMS
- Voltage L-L Average RMS
- Voltage A-N RMS
- Voltage B-N RMS
- Voltage C-N RMS
- Voltage L-L Average RMS
- Frequency
- 10. Current A RMS
- 1. Current B RMS
- 2. Current C RMS
- 13. Current Average RMS
- 14. Current A RMS Peak Last Minute
- 5. Current B RMS Peak Last Minute
- 6. Current C RMS Peak Last Minute
- 17. Power Factor A
- 8. Power Factor B
- 19. Power Factor C
- 20. Power Factor Total
- . Real Power Total RMS
- 22. Reactive Power Total RMS
- 23. Apparent Power Total RMS
- 24. Real Energy Total
- 25. Reactive Energy Total
- 6. Apparent Energy Total
- 27. High Priority Alarm Present

Product certification

EnergiX-P40 catalogue

Product certification

TTA certification

intertek

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 Chris Yu ASTA Observer Senior Project Engineer Transmission, Distribution & Installation of electricity Commercial Electrical Tel :+86 20 8213 9688*3986 Dir :+66 20 8213 9688*3986 Intertek China Intertek China Intertek Testing Services (Guangzhou) Ltd. No. 3-1, Xinhai Xinyi Road, Huangge Town, Nansha District, Guangzhou City, China Tel: (86 20) 020-28209114 www.intertek.com

Email : <u>chris.yu@intertek.com</u> Website : <u>www.intertek.com.cn</u>

Temperature rise limits

Comply with IEC 61439-2: 2020-10.10

Degree of protection

Comply with IEC 61439-2: 2020-10.3

Strength of material and parts

- Comply with IEC 61439-2: 2020-10.2
- Resistance to corrosion
- Properties of insulating materials
- Thermal stability
- Lifting
- Mechanical operation

Icc Test

Comply with IEC 61439-2-2020-10.11

 Main busbar, Outgoing circuits15kA Incoming circuits 50kA

Seismic report

Mechanical test

 Mechanical operation Degree of protection

Seismic test

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

15 | CHINT

Resistance lo abnormal heat and fire due to internal electric effects

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	Inside 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	Тор	
Number of poles	3Ph+N+PE	Maintain type	Front	
Operating temperature	0°C -40°C	Corrosion prevention	sea salt spray test	
Storage temperature	-25°C ~+70°C	Form	Form 2B	
Display*	НМІ	Hot swappable MCB	Y	
Power Monitoring System*	Conventional or Branch circuit monitoring as required			

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

Asia Pacific

China | Global HQ

Zhejiang CHINT Electrics Co., Ltd. Address:A3 Building, No. 3655 Sixian Road, Songjiang Shanghai 201614. Tel: +86 21 5677 7777 Fax: +86 21 5677 7777 Email: global-sales@chintglobal.com Website: www.chintglobal.com

Singapore | Asia Pacific HQ CHINT Global Pte Ltd

Address: 8 Kallang Avenue, #04-06/09 Aperia Office Tower 1, Singapore 339509. Tel: +65 6329 3110 Fax: +65 6329 3159 Website: www.chintglobal.com

Sunlight Electrical Pte Ltd

Address: 1 Third Chin Bee Road, Singapore 618679. Tel: +65 6741 9055 Fax : +65 6265 4586 Email: sales@sunlightgroup.com Website: www.sunlightgroup.com

India

CHINT India Energy Solution Private Limited

Address: Discovery Tower, Plot No. A-17, Ground Floor Industrial Area Sector 62 Noida, India 201309. Tel: +91 1202 9750 57 Emall: marketing@chint.co.in Website: www.chint.co.in

Philippines

CHINT Electric Co., Ltd Address: Unit 201, Taipan Place, F. Ortigas Jr. Road, Ortigas Center, Pasig City, Metro Manila, Philippines. Tel: +63 967 273 0174 / +63 977 017 6320 Email: liq07@chintglobal.com / wencell@chintglobal.com Website: www.chintglobal.com

Latin America

Brazil

CHINT Elétricos América do Sul Ltda. Add: Av. Paulista, 1765 - Edifício Scarpa - Conjunto 22, Bela Vista - CEP 01311-200 - São Paulo - SP Tel. :+55 (11) 3266-7786 E-mail: chintbr@chint.com

Peru

CHINT LATAM (PERU) S.A.C. Add: Av. Camino Real No.348, Torre El Pilar, Oficina 603, San Isidro, Lima 27, Peru Tel: +51 1 763 4917 Email: chintlatamperu@chint.com

Indonesia

PT. CHINT Indonesia

Address: Kompleks Prima Center I, Blok C9-10, Jl. Pesing Poglar Jl. Pool PPD No. 11, RT.9/RW.2, Cengkareng, Jakarta Barat. Tel: +62 21 5436 3000 Email: sales@chint-Indonesia.com Website: www.chint-Indonesia.com

Vietnam

CHINT Vietnam Holding Co., Ltd

Address: So 2Bis-4-6, Le Thanh Ton, P. Ben Nghe Quan 1, Ho Chi Minh, Vietnam. Tel: +84 0283 8270 015 Email: marketing.vn@chintglobal.com Website: www.chintglobal.vn

Sunlight Electrical (VN) Co., Ltd

Address: 20 Doc Lap Ave, VSIP, Thuan An City, Binh Duong Province, Vietnam. Tel: +84 0274 3743 505 Email: sales.sev@sunlightgroup-vn.com.vn Website: www.sunlightvetnam.com.vn

Cambodia

CHINT (Cambodia) Power Equipment Co., Ltd

Address: No.15, St. 542, Sangkat Boeung Kok 1, Khan Toul Kork, Phnom Penh, Cambodia. Tel: +855 23 231 077 Email: Ibin3@chintglobal.com Website: www.chintglobal.com

SchneiTec CHINT Co., Ltd

Address: Ansor Kdam Village, Sna Ansa Commune, Krakor District, Pursat Province, Cambodia Tel: +855 09 5353 268 Email: liubin@schneitec-chint.com.kh / info@schneitec-chint.com.kh Website: www.schneitec-chint.com.kh

Ecuador CHINT ELECTRICS (HONG KONG) LIMITED (Ecaudor Branch)

Add.: Calle: REP.DEL SALVADOR Número: 10-84 Intersección: AV NACIONES

UNIDAS Edificio: CENTRO COMERCIAL MANSION BLANCA E-mail: lufz@chintglobal.com

Europe

Italy

CHINT Italia Investment Srl

Add: VIa Bruno Maderna 7 30174 Venezia Tel: +39 041.446614 Fax +39 041.5845900 E-mail: info@chint.it

Spain

CHINT Electrics S.L.

Add: Calle José Echegaray, Num 8.Parque Empresarial Las RozasEdIfificio 3, Planta Baja, Ofificina 7-8.C.P: 28232 Las Rozas (Madrid) Tel: +34 91 645 03 53 E-mail: info@chint.eu

West Asia & Africa

Egypt

CHINT Electrics (Egypt) Co., Ltd Add: Building B16 - Smart village, Abu Rawash - Giza, Egypt Tel: +20 1097173769 P.O BOX : 00202 Email: chinteg@chintglobal.com

Kenya

ZHENGTAI ELECTRICS(KENYA) CO., LIMITED

Add: OFFICE 1A, 8TH FLOOR, KISM TOWERS, LR No. 209/945/1– NGONG ROAD – NAIROBI, KENYA Tel: +254 072256485 Email: chintkenya@chintglobal.com

North America

United States

NOARK Electric (USA) Inc Add: 2188 Pomona Blvd., Pomona, CA 91768

Tel: 626-330-7007 Fax: 626-330-8035 E-mail: nasales@noark-electric.com

Czech Republic

NOARK Electric Europe s.r.o.

Add: Sezemická 2757/2, 193 00 Prague 9 Tel: +420 226 203 120 Email: europe@noark-electric.com

Turkey

CHINT Turca Elektrik Sanayi VE Ticaret Anonim Sirketi

Add: Zumrutevler Mahallesi Ural Sokak No. 22/18 NAS PLAZA B Block KAT 1, Maltepe, Istanbul Tel: +90216 621 00 55 Fax:+90216 621 00 50 E-mail: fatura@chint.com.tr

U.A.E CHINT MIDDLE EAST AND AFRICA DMCC

Add: Unit No: 2101, 21085,2109, Jumeirah business center 1, Cluster G, Jumeirah Lakes Towers, Dubai, UAE Tel: +97145571532 P.O BOX: 337555 E-mail: global-sales@chint.com

Nigeria

CHINT POWER & ENERGY SERVICES CO., LIMITED Add: 3RD FLOOR TOWER 2, CHURGATE BUILDING , VICTORIA ISLAND, LAGOS Tel: +234 8110728119 E-mail: czjie@chintglobal.com

Mexico

CHINT SOLAR MEXICO S DE RL DE CV

Add: Miguel Cervantes Saavedra 169 Piso 11 Col. Granada Del. Miguel Hidalgo C.P. 11520 CDMX. México Tel: +52 1-55-8881-6127 E-mail: info@chint-mexico.com

CHINT GLOBAL PTE. LTD. Building A3, 3655 SiXian Road, Songjiang District, Shanghai, China

Tel: +86-21-5677 7777 Web: www.chintalobal.com E-mail: global-sales@chintglobal.com

A CHNT COMPANY

CHNT

EnergiX-P40 Catalogue