



CHINT NGD8H Semiconductor Circuit-Breakers

Microsecond-Level Breaking, Zero Arc-Over



CHINT GLOBAL INTERNATIONAL PTE. LTD.

Add: 8 Kallang Avenue, #04-06/09 Aperia Office Tower 1, Singapore 339509.

Tel: +86-21-5677 7777 **Web:** www.chintglobal.com

E-mail: global-sales@chintglobal.com

CHINT NGD8H

Semiconductor Circuit-Breakers

The NGD8H SemiConductor Hybrid Circuit-Breaker is designed for Data Centers (AIDC optimized) , PV power plants, energy storage systems and industrial DC power distribution applications. It adopts a self-developed dual eddy-current repulsion mechanism to achieve microsecond-level ultra-fast breaking, combining the arc-free advantage of dedicated solid-state semiconductor high-speed switches with the low conduction loss of mechanical contacts. Its steady-state conduction efficiency exceeds 99.99%, and no forced cooling is required.

This product integrates comprehensive protection functions including overload, short-circuit, earth fault, over/under voltage and overtemperature, delivering accurate and reliable fault protection. It also supports real-time full electrical parameter measurement, event logging, fault recording, health monitoring, operation self-test, as well as remote communication and control.



Standard Compliance

Manufactured in full compliance with IEC 60947-10 standard for low-voltage switchgear and controlgear.



Ultra-Fast Breaking

Industry-leading breaking speed: breaking response time < 150μs, fault clearing time < 1000μs, adapting to short-circuit current rise rate up to 8A/μs.



High Efficiency & Long Lifespan

Innovative hybrid topology with short-circuit breaking capacity > 100kA and conduction efficiency > 99.99%. Free of mechanical arc erosion, electrical lifespan exceeds 20,000 operations with natural cooling only.



Integrated Intelligence

Built-in real-time measurement of voltage, current, power and temperature, supporting event logging, fault recording, health monitoring, real-time self-test, CAN & Zigbee communication and remote control.

Key Specifications

Parameter	Value
Rated Voltage	800/1000/1500 V DC
Rated Current	630A /2500 A
Short-Circuit Breaking Capacity	≥ 100 kA
Interruption Response Time	≤ 150 μs
Electrical Endurance (solid-state switching)	≥ 20,000 operations
Maximum Short-circuit Current Rise Rate (di/dt)	8 A/μs
Number of Poles	2-pole
Conduction Efficiency	> 99.99%
Cooling Method	Passive cooling

Application Scenarios



Data Centers (AIDC optimized)

AI & HPC Data Centers

Ultra-fast DC protection for mission-critical compute infrastructure.



Energy Storage Systems

New Energy Systems

PV, BESS, and EV charging networks needing bidirectional fault interruption.



Industrial DC Power Distribution

Solid-State Transformer Output

Downstream protection for SST-based smart grid architectures.



Microgrids

Arc-free operation ideal for marine, mining, and hazardous environments.