

DNRH8 Combined Switch

Product Catalog



About GRL



Founded in 1992



24 Invention Patents, 83 Utility Model Patents



National High-Tech Enterprise



Zhejiang Provincial "Specialized, Sophisticated, Distinctive, and Innovative" SME



Zhejiang Provincial Invisible Champion Enterprise



Zhejiang Provincial (Key) Enterprise Research Institute



Zhejiang Provincial Industrial Design Center



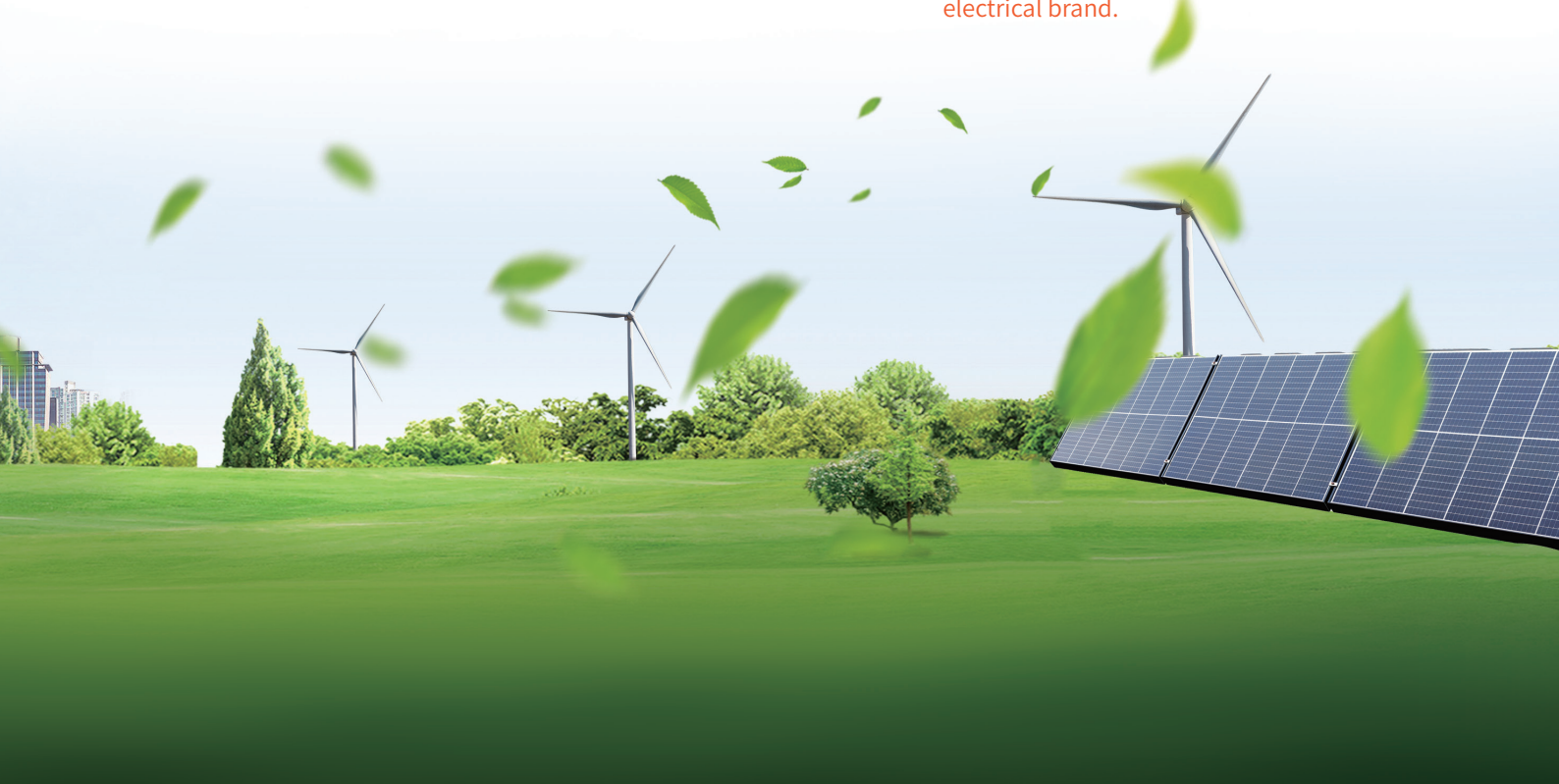
Wenzhou Green Factory



Zhejiang GRL Electric Co., Ltd. Established in 1992, GRL specializes in R&D, production, and sales of fuses, enclosed busway systems, and disconnectors. Our core products include high/low-voltage fuses, disconnectors, enclosed busway systems, new energy copper connections, and surge protectors. These products are widely used in energy storage, charging stations, power grids, photovoltaic/wind power generation, automotive manufacturing, machinery, marine power distribution, and building infrastructure. GRL has provided thousands of electrical components and solutions for new energy, industrial control, power systems, and new infrastructure, establishing itself as a leading brand in electrical connection and protection.

The company operates modern factory facilities spanning over 43,000 square meters, equipped with more than 150 machining equipment units, over 30 specialized production lines, and more than 80 testing devices—including fuse comprehensive characteristic test benches, switch temperature rise test benches, mechanical life test benches, and salt spray test chambers. By implementing scientific production processes and a rigorous quality management system, the company's products have achieved performance standards comparable to international industry benchmarks. Building upon the full adoption of process-oriented and standardized management frameworks, the corporation is actively advancing the development of lean digitalization and a comprehensive employee performance management system.

GRL is committed to advancing electrical safety, reliability, and efficiency while adhering to green development principles and social responsibility. We continuously improve to become a globally respected electrical brand.



Visionaries win the future

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DNRH8 Combined Switch

High Performance & Safety

Compliant with utilization categories DC-PV1, DC-PV2, and DC-21B; features minimal arc distance and arcing time <3ms.

IP67 waterproof rating.

The product features undervoltage trip functionality.

Smart Control & User-Friendly

Supports DC motor drive and 24V remote control (0.5s fast switching).

Ultra-low standby power consumption (<1W).

Multiple modes (auto/manual) with real-time status feedback.

Low manual operating force; lockable in "OFF" position for safety.

Integrated Design, Cost Efficiency

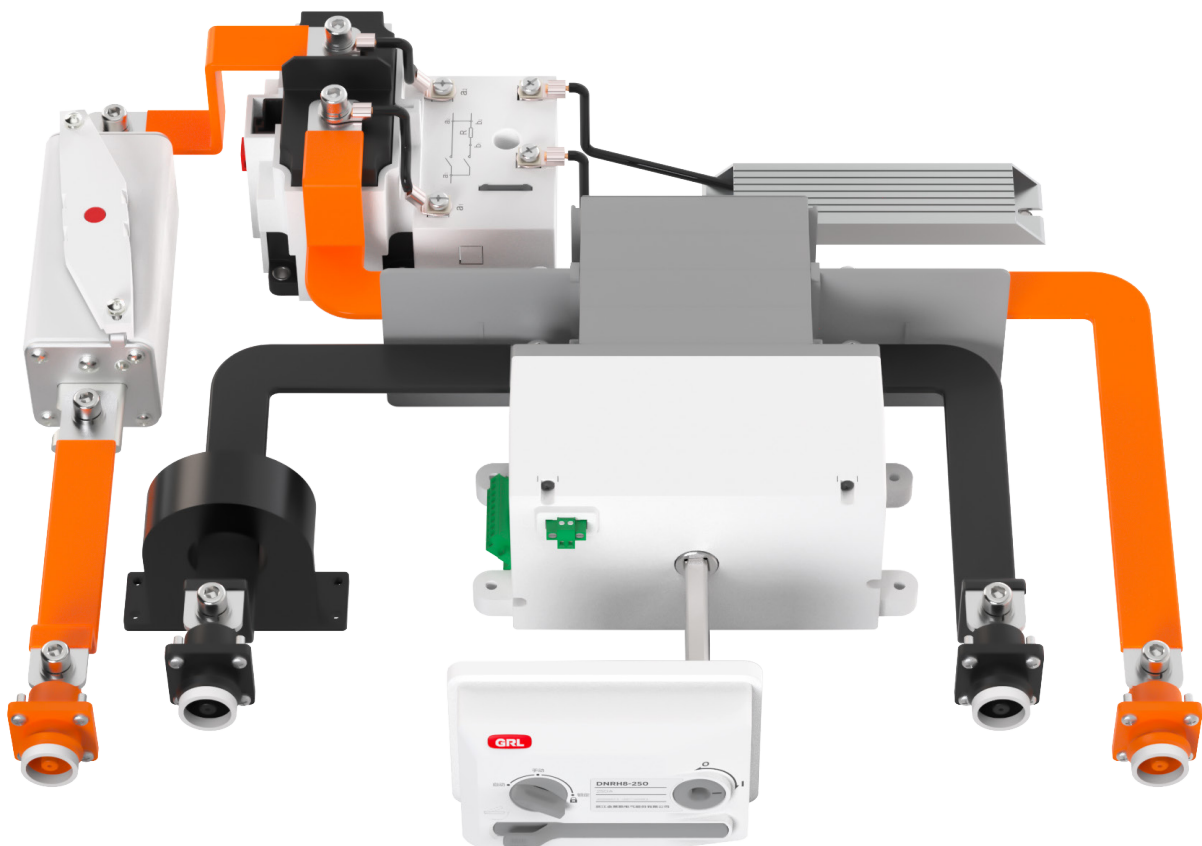
Combines main/pre-charge relays into a single unit.

Reduces external wiring and installation errors.

Streamlines installation and enhances efficiency.

Collaborative Protection, Longevity

Relay module works with disconnecter switch (electrical lifespan: 1,000 cycles) to extend relay life and prevent contactor welding (vs. circuit breaker solutions).



DNRH8 Combined Switch

Product Overview

The DNRH8 series Combined switch is designed for DC circuits up to 1500V and rated currents up to 630A, enabling load switching and isolation. It is widely used in PV systems, energy storage, and industrial applications.

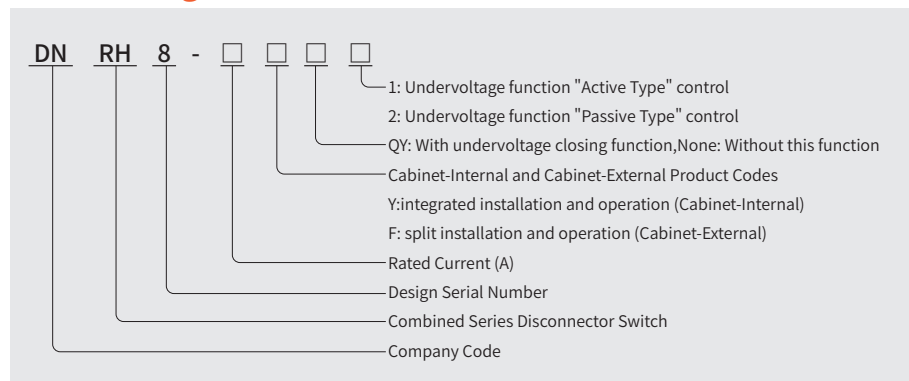
Applicable Standards

GB/T 14048.3、IEC 60947-3

Certifications

TÜV、CCC、CE、CB

Model Designation



Key Technical Parameters

Model		DNRH8-250Y/F			DNRH8-400Y/F			DNRH8-630Y/F	
Rated Operational Current	(A)	200	225	250	275	325	400	500	630
Rated Operational Voltage	(V)	DC 1500							
Rated Insulation Voltage	(Ui)	1500V							
Rated Short-Circuit Making Capacity	(Icm)	15kA							
Rated Short-Time Withstand Current	(Icw)	15kA 0.1s,10kA 1s							
Rated Conditional Short-Circuit Current	(Iq)	100kA							
Electrical Lifespan	(cycles)	2000			600			400	
Mechanical Lifespan	(cycles)	> 10000							
Control Type		Manual / Remote (24V)							
Normal Operating Conditions									
Ambient Temperature		-40°C to +180°C (derating required above +60°C; see Table 1).							
Humidity		≤50% RH at +40°C; ≤90% RH at +20°C. Condensation requires special measures.							
Altitude		≤2000m (derating required for 2000m–5000m; see Table 2).							
Pollution Degree		III							
Installation Category		IV (power level), III (distribution/control level)							
IP Rating		IP20 (cabinet-internal), IP67 (cabinet-external)							

Environmental Derating Coefficients

Table 1

Temperature (°C)	60	65	70	75	80
Power Freq. Withstand (V)	5000	5000	5000	5000	5000
Current Derating	1	0.96	0.93	0.87	0.83
Voltage Derating	1	1	1	1	1

DNRH8 Combined Switch

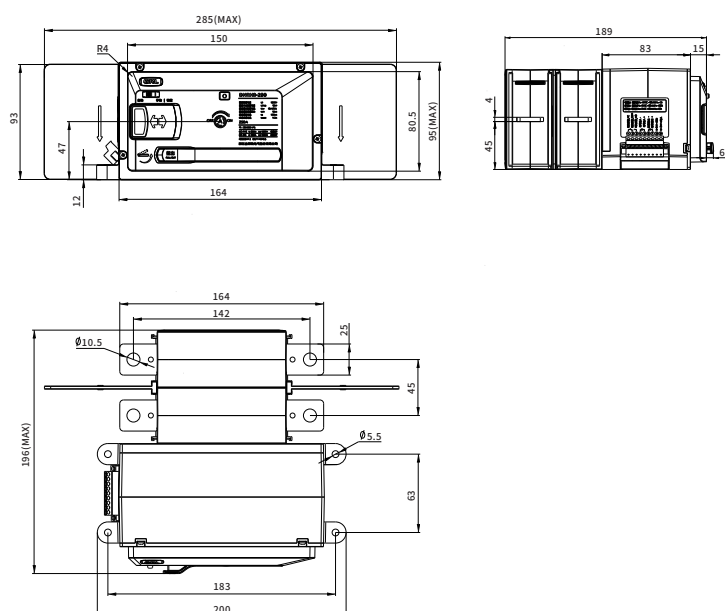
Altitude Derating Coefficients (<5000m)

Table 2

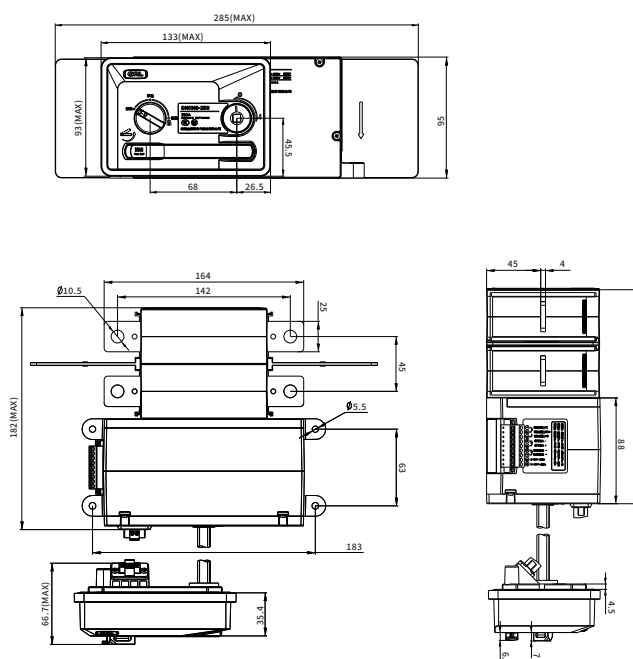
Altitude (m)	2000	2500	3000	3500	4000
Power Freq. Withstand (V)	5000	5000	5000	5000	5000
Current Derating	1	0.95	0.93	0.88	0.82
Voltage Derating	1	1	1	1	1

Dimensional drawings(mm)

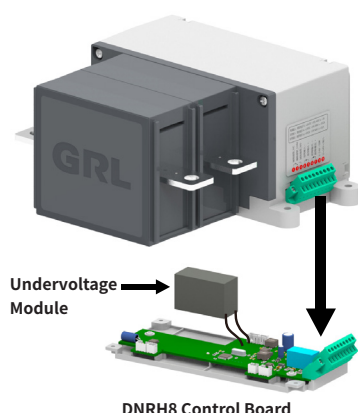
DNRH8-250Y/400Y/630Y



DNRH8-250F/400F/630F



Optional Functions & Products



DNRH8-□□QY□ Undervoltage Module

Module Function Overview

QY1 (Active Type)

Function: When the power supply voltage of the DNRH8 device drops below 50%, the device automatically initiates a trip action.

Response Time: <0.5 seconds.

QY2 (Passive Type)

Function: When the power supply voltage drops below 50%:

If the control terminal receives a trip signal, the device trips immediately.

If no trip signal is received, the device remains unaffected.

Power Loss Backup: Maintains functionality for ≥ 2 minutes after power loss.

JDQMK-□A Relay Module

Product Overview

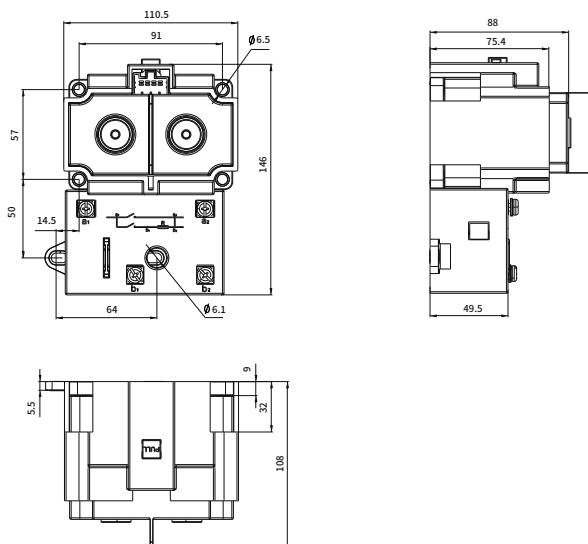
This module integrates main/pre-charge relays, pre-charge resistors, and wiring. Users may select relay brands based on application needs.

Key Technical Parameters

Model	JDQMK-250A	JDQMK-350A	Pre-charge Relay
Rated Operational Current (A)	250	350	40
Rated Operational Voltage (V)	DC 1500		

Notes: Default configuration uses LAZZEN relays unless otherwise specified. Notify GRL for parameter matching if selecting alternative brands.

Dimensional drawings (mm)



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This product manual is printed by GRL. It is only used to explain the relevant information of this series of products. The information might be updated based on the technical upgrade or update. GRL holds the right to update the manual without prior notice. Welcome to contact GRL for more details.