DNJ1 Series
High-Current Terminal

Product Catalog

G26004-T-C01

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About GRL

- Zhejiang Provincial Invisible Champion Enterprise
- Zhejiang Provincial (Key) Enterprise Research Institute
- National High-Tech Enterprise
- Zhejiang Provincial Industrial Design Center
- Wenzhou Green Factory
- Zhejiang Provincial "Specialized, Sophisticated, Distinctive, and Innovative" Enterprise

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 busbar systems, new energy copper connections, and outdoor high-voltage. 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.

IATF 16949 质量管理体系 ISO9001 质量管理体系 ISO14001 环境管理体系 ISO45001 职业健康安全管理体系 CCC CE CB TÜV RoHS UL CCS

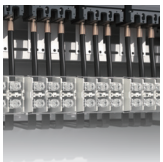
DNJ1 Series High-Current Terminal

Safety Upgrade

The high-current terminal transfers the cable connection point from the direct wiring terminal of the main switch to an independent terminal area, effectively avoiding the risks of loose connection, stress concentration or accidental short circuit that may occur when operating large cross-section cables directly on the main switch in a confined space. The terminal itself features touch-proof protection and a reliable crimping structure, providing a safer working interface for operators.

Convenience and Efficiency

During the manufacturing, on-site installation and subsequent maintenance of control cabinets and power distribution cabinets, the high-current terminal achieves reliable connection and isolation between cable connections and equipment inside the cabinet. Customers can first pre-install and check external cables on the terminal side, and then establish connection with the main switch through internal or bridging conductors. When equipment needs maintenance or replacement, external cables can be disconnected on the terminal side without repeatedly operating the main switch terminals, greatly reducing maintenance complexity and downtime.



Optimized Wiring

High-current terminals are generally modular in design, supporting centralized arrangement on the incoming side of the cabinet, making the main circuit path inside the cabinet clearer and more orderly. Together with matching insulating bases, protective covers and identification accessories, they help achieve standardized and aesthetic cabinet layout, meeting the requirements of modern industrial electrical equipment for standardization.

Cost Reduction and Efficiency Increase

In applications with large cross-section cables, using high-current terminals together with Jinlaile flexible busbars, through advance design and planning, can shorten on-site installation time to 3-5 minutes, saving more than 70% of labor costs. It avoids time-consuming and labor-intensive processes in traditional cable processing (cutting, stripping, crimping copper lugs, applying heat shrink tubing, bending and shaping, aligning holes and tightening, etc.).

Typical Application Industries

Automobile Manufacturing Industry

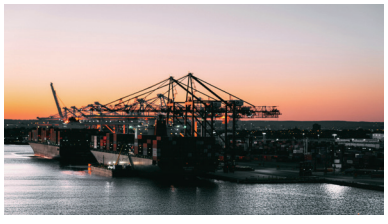
In automobile assembly and power battery production lines, high-current terminals (250-800A) are used in the main incoming circuit of distribution cabinets, adapting to high load, continuous production, frequent start-stop and high-current surges, ensuring stable connection.

Food and Beverage Industry

In humid and corrosive environments such as beverage filling, packaging and refrigeration, high-current terminals are used for main power incoming supply. Their "terminal first, switch second" mode facilitates quick and safe isolation of power during cleaning and maintenance.

Rail Transit Industry

In subway and light rail traction substations, high-current terminals deliver DC power from rectifier cabinets to locomotives. The core requirements are withstand capability against extreme short-circuit surges and long-term maintenance-free operation under outdoor humidity and vibration.



Marine Industry

In large ship electric propulsion and port shore power, high-current terminals are used in main switchboards, propulsion drives, etc., carrying thousands of amperes. The key points are corrosion resistance under high salt spray and humidity, and vibration resistance to prevent loosening.

Metallurgical Industry

In aluminum electrolysis, electric arc furnaces and rolling mills, high-current terminals carry tens of thousands of amperes. The core requirements are low-energy-consumption connection under extreme thermal loads and long-term maintenance-free operation in harsh, dusty environments.

Data Centers

In data center power supply and distribution systems, high-current terminals carry AC or DC currents ranging from hundreds to thousands of amperes. They ensure "low-impedance connection in high-heat environments" and "operational safety during online maintenance and expansion".

DNJ1 Series
High-Current Terminal

Product Description

High-current terminals (current rating range: 250A, 400A, 800A) are connection components specifically designed for high-current transmission scenarios in industrial electrical systems. As the core hub for incoming and outgoing connections inside control cabinets and distribution cabinets, they undertake the key function of safely and reliably introducing external main cables to the main switch inside the cabinet. Through the intermediate connection mode of "cable – terminal – main switch", high-current terminals achieve significant improvements in electrical safety, installation efficiency and maintenance convenience.

Applicable Standards

GB/T 14048.7、IEC60947-7-1

Model and Meaning

DN J 1 - □ □

- Number of poles: 3: 3 poles, 4: 4 poles, 5: 5 poles
- Rated current (A): 250, 400, 800
- Design code
- Terminal
- Company code

Main Technical Parameters

Rated current Ie (A)	250	400	800
Rated insulation voltage Ui (V)		1000	
Max. input conductor cross-section (mm^2)	150	240	240
Min. input conductor cross-section (mm^2)	16	25	50
Terminal capacity (Cu/Al wire)	35 - 150 mm^2（1x）/16 - 70 mm^2（2x）	50 - 240 mm^2（1x）/25 - 120 mm^2（2x）	120 - 240 mm^2（2x）/50 - 185 mm^2（3x）
Terminal capacity (flat busbar) (max×max)	18 mm × 10 mm	25 mm×15 mm	50 mm × 20 mm
Number of wire connections per pole	2	2	3
Number of copper busbar connections per pole	1	1	2
Product weight (kg)	3 极：1.9	3 极：2.8	3 极：8.5
	4 极：2.5	4 极：3.7	4 极：11.2
	5 极：3.1	5 极：4.6	5 极：14

Normal Operating Conditions

1. Operating temperature: Ambient air temperature does not exceed 40°C, and its average valueover 24h does not exceed +-35°C. The lower limit of ambient air temperature is -5°C.
2. Altitude: The altitude of the installation site does not exceed 2000m.
3. Humidity: At a maximum temperature of +-40° C, the relative humidity of the air does not exceed50%; at lower temperatures, higher relative humidity is permissible, e.g., 90% at +20°C. Specialmeasures shall be taken for occasional condensation due to temperature changes.
4. Highest pollution degree: 3

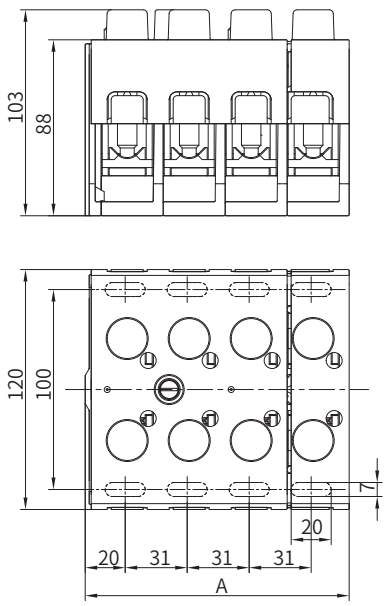
Structural Features

1. Modular assembly structure: flexible selection of number of poles;
2. Enables cable-busbar, cable-cable or busbar-busbar connections.

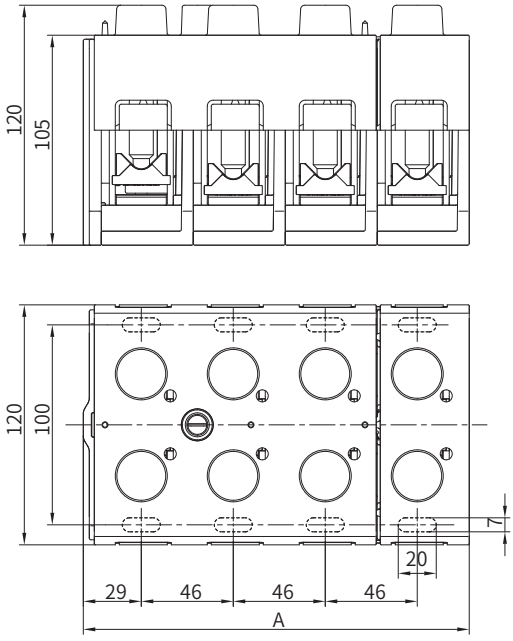
DNJ1 Series
High-Current Terminal

Overall Dimensions (mm)

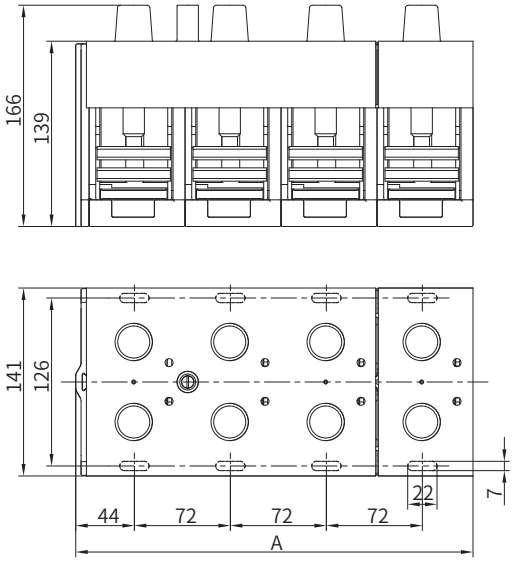
DNJ1-250



DNJ1-400



DNJ1-800



Model	Number of poles	3	4	5
DNJ1-250	A(mm)	101	132	163
DNJ1-400		147	193	239
DNJ1-800		226	298	370

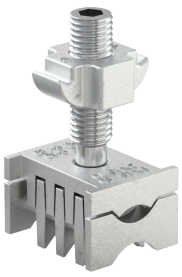
DNJ1 Series
High-Current Terminal

Ordering code list

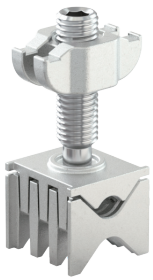
Model	Order No.
DNJ1-250/3	DN54300
DNJ1-400/3	DN54301
DNJ1-800/3	DN54302
DNJ1-250/4	DN54200
DNJ1-400/4	DN54201
DNJ1-800/4	DN54202
DNJ1-250/5	DN54500
DNJ1-400/5	DN54501
DNJ1-800/5	DN54502

Terminal conversion kit (Accessory pack)

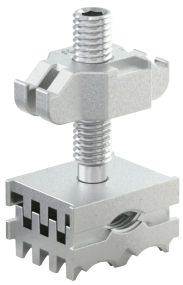
Converts busbar terminal to cable terminal



DNJ1-250



DNJ1-400



DNJ1-800

Model	Order No.
DNJ1-250	DN59400
DNJ1-400	DN59401
DNJ1-800	DN59402

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www.grlgroup.com

Website: **www.grlgroup.com**
E-mail: **tim@grlele.com**

Phone: **+86-13757783569**
WhatsApp: **+86 13757783569**

ZHEJIANG GRL ELECTRIC CO.,LTD.
Add:No.66,Punan 5 Road,YueQing Economic Development Zone, Yueqing City, Zhejiang, China
Tel: 0577-62700791 Fax: 0577-62702791