



INDUSTRIAL SOLUTION SYSTEMS



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纳图电气集团股份有限公司
NATUS ELECTRIC GROUP CO.,LTD.

地址：中国江苏省常州市天宁区劳动东路369号
Address : No.369 Laodong East Road,Tianning District,Changzhou,Jiangsu Province,China
电话 / Telephone : 400-928-1888
邮箱 / E-mail : sales@natus-cn.com
网址 / Web : www.natus-cn.com
www.natus.de

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INDUSTRIAL SOLUTION SYSTEMS

GXL

低压动力配电箱

Low-voltage power distribution cabinet



纳图电气集团股份有限公司
NATUS ELECTRIC GROUP CO.,LTD.

集团业务 Group Business

集团专注于中低压电力行业的系统集成、EPC工程总包服务及核心产品的研发、生产与销售。在电力设备领域,我们深耕智能电气成套产品、高端电力元器件、先进电能质量治理产品、智能控制仪表与控制系统。基于人工智能与大数据分析的技术积累,我们提供变电站与输电线路的气象灾害预防设备与安全运行综合解决方案。在新技术领域,我们聚焦小区域低空气象高精度预测技术,为低空经济发展提供综合性的产品与服务。



The Group specializes in system integration, EPC turnkey services, and the R&D, production, and sales of core products within the medium and low-voltage power industry. In the field of power equipment, we have deep expertise in intelligent electrical switchgear system, high-end power components, advanced power quality management products, intelligent control instruments, and control systems. Leveraging accumulated expertise in artificial intelligence and big data analytics, we provide comprehensive solutions for meteorological disaster prevention equipment and the safe operation of substations and transmission lines. In the domain of new technologies, we focus on small-area, low-altitude meteorological high-precision prediction technology, offering integrated products and services to support the development of the low-altitude economy.



集团理念 Group Vision

纳图电气集团源自德国,立足中国,服务全球。自1956年成立以来,集团以德国技术为基础,深度融合中国智慧与全球视野,依托强大的中国研发与制造团队,精准响应全球市场需求,为各行业客户提供智慧电力的专业解决方案。集团坚持以客户为中心,致力于创新产品、可靠技术与精益制造,携手全球用户共同构建更智能、高效、可持续的电力能源未来。



Natus Electric Group originates from Germany, is firmly rooted in China, and serves the global market. Since its establishment in 1956, the group has built upon German technology deeply integrating Chinese expertise and a global perspective. Supported by a robust Chinese R&D and manufacturing team, we precisely respond to global market demands, delivering professional intelligent power solutions for clients across various industries. Adhering to a customer-centric approach, the group is committed to innovative products, reliable technology, and lean manufacturing, working hand-in-hand with global users to build a smarter, more efficient, and sustainable future for the power and energy sector.

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GXL-VFD低压动力配电箱

LOW-VOLTAGE POWER DISTRIBUTION CABINET

GXL配电箱是一款小型化智能配电设备。主要用于动力电能的分配和照明供电使用，也可以作为变频器控制柜，用于电动机的启停保护。是配电系统的末级设备。设备包含开关设备、测量仪表、保护电器、变频器及辅助设备等，设备外壳是由高强度钣金焊接而成的金属半封闭式箱体。主要用于发电厂、工矿企业及民用建筑场所，在交流电压500伏及以下的三相四线或三相五线系统作动力配电之用，产品符合IEC61439、GB7251等标准。

The GXL distribution box is a miniaturized intelligent power distribution device. It is mainly used for the distribution of power energy and power supply for lighting; it can also serve as a frequency converter control cabinet for the start-stop protection of motors. It is the final-stage equipment in the power distribution system. The device includes switchgear, measuring instruments, protective devices, frequency converters, and auxiliary equipment. Its enclosure is a metal semi-enclosed cabinet made of high-strength sheet metal through welding. It is mainly applied in power plants, industrial and mining enterprises, and civil construction sites. It is used for power distribution in three-phase four-wire or three-phase five-wire systems with an AC voltage of 500V or below. This product complies with standards such as IEC 61439 and GB 7251.



- 柜(箱)结构用采用全金属外壳,可采用型钢拼装,也可用薄钢板弯制焊接而成; 标准化设计、结构紧凑、通用性强;
 - 柜(箱)安装方式为立柜(或挂箱),立柜则采用2mm的优质冷轧钢板,挂箱采用1.5mm优质冷轧钢板;
 - 柜(箱)内电气安装板可单独拆卸;
 - 进出线电缆由底部引入。用户有特殊要求,亦可在箱顶盖板上开进线敲落孔或加装母线室;
 - 柜分单独使用或排列并柜使用。如排列并柜使用,则柜与柜之间装有隔板,以减少事故的扩大;
- The structure of the cabinet (box) adopts all-metal shell, which can be assembled by steel profiles or welded by thin steel plate bending;
 - The installation mode of the cabinet (box) is standing cabinet (or hanging box), and the standing cabinet adopts 2mm high-quality cold-rolled steel plate and the hanging box adopts 1.5mm high-quality cold-rolled steel plate;
 - The electrical installation board inside the cabinet (box) can be removed separately;
 - The inlet and outlet cables are introduced from the bottom. Users have special requirements, can also be in the box on the top of the cover plate to open into the line knock-down hole or add bus room;
 - Cabinets are divided into individual use or arrangement and use of cabinets. If the arrangement is used together with the cabinet, the cabinet is equipped with a partition between the cabinet to reduce the expansion of the accident;

技术参数Technical Specifications

刀熔组合开关 Knife Fused Combination Switch

型号 Types	额定电流 - A Rated current	熔芯额定电流 - A Rated current of fuse core
HR3-100/34	100	30、40、50、60、80、100
HR3-200/34	200	80、100、120、150、200
HR3-400/34	400	150、200、250、350、400
HR3-600/34	600	350、400、450、500、600

空气断路器 Air Circuit Breaker

型号 Types	额定电流 - A Rated current	熔芯额定电流 - A Rated current of fuse core
DZ20-100	100	16、20、25、32、40、50、60、80、100
DZ20-160	160	16、20、25、30、40、50、60、80、100、125、160
DZ20-225	225	100、125、160、180、200、225
DZ20-250	250	100、125、160、180、200、225、250

GXL-VFD变频控制柜

VARIABLE FREQUENCY DRIVE (VFD) CONTROL CABINET

GXL包含低压变频器控制柜系列, 用于交流50HZ、额定电压690V以下的电动机控制, 最大输出功率300KW。整柜防护等级IP65, 可用于各种环境恶劣及复杂环境下。可将50HZ、380V或690V工频交流电输出为频率可调、电压可变的交流电, 加在电机绕组上,从而调节电机转速, 使电机在低频、低电压平稳启动, 逐渐上升到工频运行, 同时亦可平稳停止。运行过程中用户可以根据需要, 随时调节电机转速。

GXL includes a series of low-voltage frequency converter control cabinets. It is used for motor control with an AC frequency of 50Hz and a rated voltage below 690V, with a maximum output power of 300KW. The entire cabinet has a protection class of IP65 and can be used in various harsh and complex environments. It can convert 50Hz, 380V or 690V power frequency AC power into AC power with adjustable frequency and variable voltage, which is applied to the motor windings. This adjusts the motor speed, enabling the motor to start smoothly at low frequency and low voltage, gradually increase to power frequency operation, and also stop smoothly. During operation, users can adjust the motor speed at any time as needed.

产品特点Product Characteristics

- 采用防水顶盖, 门板采用发泡工艺进行密封, 防护等级高达IP65;
 - 外壳采用斜接一体式焊接而成, 强度高;
 - 具有完善的保护功能 : 过流保护、过压/欠压保护、过载保护、缺相保护、短路保护等;
 - 平滑调速与精确控制, 采用无极调速及高精度的控制;
 - 设有标准Modbus RTU通讯的RS485串口。变频器的参数可通过网络上传至上一级控制系统主机, 并可在上一级控制系统主机上在线设定、修改和读取变频器的各项参数;
- Features a waterproof top cover with foam-sealed door panels, achieving an IP65 protection rating;
 - The housing is constructed with a beveled, one-piece welded design for excellent strength;
 - Features comprehensive protection functions: overcurrent protection, overvoltage/undervoltage protection, overload protection, phase loss protection, short-circuit protection, etc;
 - Smooth speed regulation and precise control, utilizing stepless speed adjustment and high-precision control;
 - Equipped with an RS485 serial port featuring standard Modbus RTU communication. The inverter's parameters can be uploaded to the host of the higher-level control system via the network, and various parameters of the inverter can be set, modified, and read online on the host of the higher-level control system;

型号 Types	功率 - KW Power	额定电压 - V Rated voltage
GXL-VFD-50	5、7.5、10、15、20、30、50 (≤50)	220、380、690
GXL-VFD-100	60、75、80、100 (≤100)	220、380、690
GXL-VFD-150	120、150 (≤150)	220、380、690
GXL-VFD-200	160、180、200 (≤200)	220、380、690
GXL-VFD-250	220、250 (≤250)	220、380、690
GXL-VFD-300	275、300 (≤300)	220、380、690

适用标准:

GB/T 37144-2018《低压机柜电气机械结构》;

GB/T 3797-2016 《电气控制设备》;

GB7251.1-2023 《压成套开关设备和控制设备》;

GB/T 4208-2017《外壳防护等级 (IP代码)》;

Applicable Standard:

GB/T 37144-2018 *Low-Voltage Cabinet - Electrical and Mechanical Structure;*

GB/T 3797-2016 *Electrical Control Equipment;*

GB 7251.1-2023 *Low-Voltage Switchgear and Controlgear Assemblies;*

GB/T 4208-2017 *Degrees of Protection Provided by Enclosures (IP Code);*

环境温度

- 短时最高温度：+40℃；
- 24 小时最高平均温度：+35℃；
- 最低温度：－20℃；
- 设备在高于上述环境温度中使用应先降容。而对于测量、计量仪表和保护继电器等的工作条件，应遵照制造商的规定；

Ambient temperature

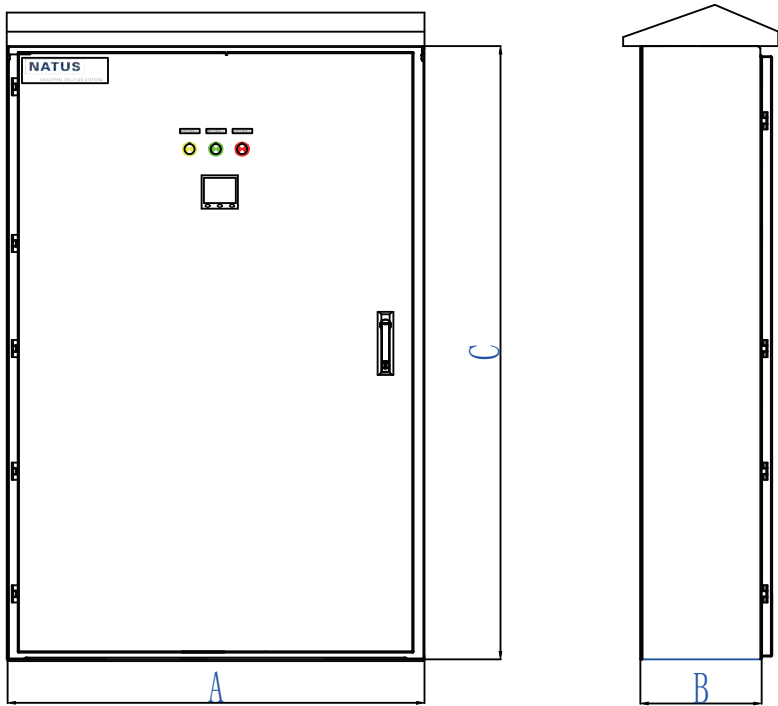
- Short-term maximum temperature: +40° C;
- Maximum 24-hour average temperature: +35° C;
- Lowest temperature: -20° C;
- When the equipment is used at an ambient temperature higher than the above-mentioned level, it shall be derated first.As for the operating conditions of measuring instruments, metering instruments, protective relays, and other such devices, they shall comply with the manufacturer's specifications;

环境条件

- 环境温度：≤+40℃，≥-20℃；
- 海拔高度:海拔不超过2000m；
- 相对湿度：≤50%, ≤90% (≥20℃时)；
- 污染等级:不超过III级；
- 周围环境:无火灾、爆炸危险、严重污秽、化学腐蚀及剧烈振动的场所；

Environment conditions

- Ambient temperature: ≤ +40 °C, ≥ -20 °C;
- Altitude: no more than 2000m above sea level;
- Relative humidity: ≤50%, ≤90% (at ≥20°C);
- Pollution level: not exceeding Class III;
- Surrounding environment: no fire, explosion danger, serious filth, chemical corrosion and violent vibration of the place;



功率 - KW Power	尺寸 (C*A*B) - mm Dimensions
≤ 11	600*500*250
15~ 18.5	600*500*300
22~37	1300*600*400
45~75	170*700*500
90~300	2200*800*600

注：尺寸可定制，具体以项目协议为准；
Note: Dimensions can be customized, and the specific details shall be subject to the project agreement.



石油石化
Petroleum and
Petrochemical Industry



新能源
New Energy



热电行业
Thermal Power Industry



建筑工地
Construction Site



矿业开采
Mining



农业灌溉
Agricultural Irrigation



PRECISION IN DETAIL