



## 低压固定分隔式开关柜 Low-Voltage Switchgear

# LGDL



天仑电气 - 为您提供一流的电力系统解决方案  
Tianlun Electric, provide you with first-class power system solution

宁波天仑电气有限公司  
NINGBO TIANLUN ELECTRIC CO., LTD

宁波市北仑区江南中路 10 号  
No. 10, Jiangnan Center Road, Beilun, Ningbo, China  
传真 (Fax): +86-574-8619 3383 网址 (Web): www.cn-tianlun.com

联系电话 (TEL)  
**+86-574-8619 3396 (中国)**  
**+86-574-8619 3389 (International)**



企业官网  
Website qr code



微信公众号  
Wechat qr code

本型录文字、参数规格及资讯仅供参考。产品以实物为准，内容亦会随时更新。本公司样本及商标版权所有，翻录必究。型录所有机型为我司专利产品，仿冒必究。  
The text, specifications and information of catalogue are for only reference. Products depend on the actual model, the content will be updated without notice. The company sample and trademark copyright reserved, and counterfeiting is not allowed. all the models for our patented products, copying is not permitted.

宁波天仑电气有限公司  
NINGBO TIANLUN ELECTRIC CO., LTD



## 公司简介 Introduction

宁波天仑电气有限公司(以下简称公司)成立于2001年1月。

公司坐落于浙江宁波,毗邻“东方大港”北仑港。拥有10000平方米的研发生产基地,年产值超亿元,目前有80多名年轻朝气的员工,其中60%为本科学历。公司是集研发、生产、销售、服务于一体的高新技术企业,致力于打造高品质的智能化、节能型、定制模式的输变电设备产品。

公司目前有符合国际及国内标准3大类18种产品,包括24kV中置式开关柜及环网柜,12kV中置式开关柜及环网柜,440V固定式分隔柜,抽屉式开关柜,预装式变电站,低压母线槽(合作生产),10kV变压器(合作生产)等等,同时部分为ABB、Schneider的授权产品。公司立足于浙江,为很多大型的制造企业、房产开发、学校、港口等用户提供了许多高质量的产品和服务,同时也出口到东非、北非及东南亚国家,获得了客户的一致满意。

公司严格执行ISO9001质量保证体系,标准化体系,安全生产标准体系,国家CCC认证体系。坚持持续提升产品质量,追求零缺陷产品,全心全意服务用户的质量方针,坚持以人为本,鼓励创新,精细化的管理理念,坚持以感恩在心为核心价值观,为我们的用户提供最好的产品和服务。

Ningbo TIANLUN Electric Co., Ltd was established in year 2001, January. It is located in Ningbo, near Beilun port, which is called “oriental grand port”. TIANLUN has 10000-square-meter researching and developing workshop and annual output value exceeds 100 million. TIANLUN has a professional team composed of 80 innovative staff, most of them have bachelor's degrees. TIANLUN is a company that integrates researching, developing, selling and service. Our purpose is to create high quality electric equipment product which is intelligentized, energy-saving and customized.

TIANLUN mainly have 18 types of products which belong to 3 majors as follow: 24 kV Intermediate switchgear and Ring Main Unit Switchgear, 12kV Intermediate Switchgear and Ring Main Unit Switchgear, 440V Fixed Isolated Switchgear, Preparatory Transformer Substation, Low Voltage Bus Duct (coproduction) and 10kV transformer (coproduction). Some products are Licensed by ABB and Schneider. TIANLUN have been providing high quality products to large manufacture enterprise, real estate, school and port constructions. At the mean time, our product are exported to Africa and southeastern countries and win satisfaction from the overseas customers.

TIANLUN strictly stick to ISO9001 standard system, standardization system, safety standard system and CCC authentication system. Our quality policy is producing good and zero defect product, having customers well served. Our management policy is people orientation, creation encouragement and high-effective system. TIANLUN always hold a thankful heart and provide top-level product with best service.

## 专业解决方案 Professional Solutions

LGDL系列低压成套开关设备是本公司针对低压配电系统开发的新一代专用柜型,由LS产电授权生产。

The LGDL series of low-voltage switchgear assemblies is a new generation of special assemblies developed for low-voltage power distribution system. The switchgear is produced under the authorization of the LS Group.



## 规范引用 Normative References

- GB 7251.1-2013 低压成套开关设备和控制设备 第1部分:总则
- GB 7251.12-2013 低压成套开关设备和控制设备 第2部分:成套电力开关和控制设备
- IEC 61439-1-2011 低压开关设备和控制设备 第1部分:总则

- GB7251.1-2013 Low-voltage switchgear and controlgear assemblies – part 1: General rules
- GB7251.12-2013 Low-voltage switchgear and controlgear assemblies – part 2: Power switchgear and controlgear assemblies
- IEC61439-1-2011 Low-voltage switchgear and controlgear assemblies – part 1: General rules

## 正常使用条件 Normal service conditions

- 使用地点的海拔高度不超过2000m。
- 周围空气温度不超过+40℃,下限为-5℃,且在24h一个周期的平均温度不超过+35℃。
- 最高温度为+40℃时的相对湿度不超过50%;温度较低时,允许有较高的相对湿度,但应考虑到由于温度变化可能产生的凝露的影响。
- 周围空气没有明显受到尘埃、烟、腐蚀性和/或可燃性气体、蒸汽或盐雾的污染。

- Altitude ≤ 2000m
- Ambient temperature: -5℃ ~ +40℃, daily average temperature: ≤ +35℃, 24 hours per cycle.
- Permissible relative humidity under the highest temperature +40℃ shall not exceed 50%; in low temperature environment, the relative humidity can be higher than that. Note that impact of condensing that may be caused due to variation in temperature shall be taken into consideration.
- Ambient air is not significantly contaminated by dust, smoke, corrosive and/or flammable gases, vapors, or salt.



ISO9001-2000



CCC 认证



WSC 北京世标认证中心



## 特殊使用条件

### Special Service Conditions

- 如有特殊使用条件，可协商解决。
- Where there are requirements for any special service conditions, negotiate with the switchgear manufacturer.

## 应用场所

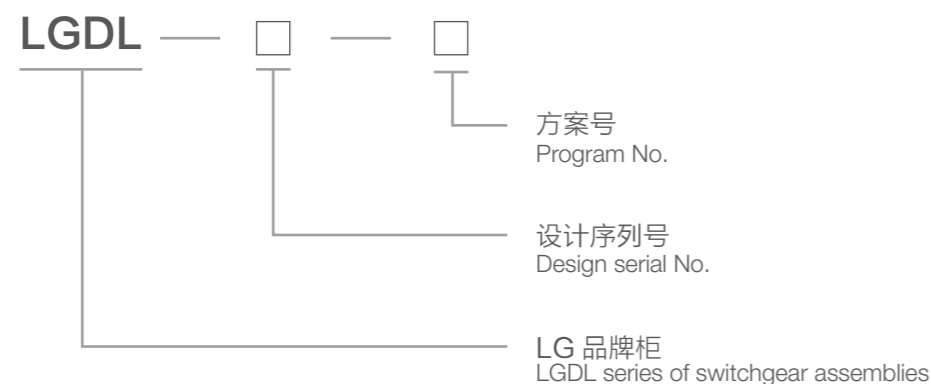
### Application

- **工业:** 油 / 气、矿山、钢铁、化工等大中小型企业；
- **交通:** 机场、码头、铁路、高速公路等公共交通设施；
- **能源:** 火电站、水电站、垃圾电站、生物质电站等；
- **环保:** 垃圾填埋场、污水处理厂等；
- **商业:** 住宅小区、商业中心、仓储中心、数据中心、商住楼等；
- **公共:** 政府办公场所、学校、医院等。

- **Industry:** enterprises of petroleum/gas, mining, iron steel, chemical, etc of different scales;
- **Traffic:** public transport facilities such as airport, port, railway, expressway, etc;
- **Energy:** thermal power station, hydroelectric power station, waste incineration power plant, biomass generated power station, etc;
- **Environmental protection:** refuse landfill, sewage treatment plant, etc;
- **Commercial buildings:** residential community, commercial center, storage center, data center, business & residential building, etc;
- **Public building:** governmental office, school, hospital, etc.

## 型号含义

### Model Description



## 技术参数

### Technical Data

名称 Name	单位 Unit	参数 Value
额定工作电压 /Rated operating voltage Ue	V	380/400
额定绝缘电压 /Rated insulation voltage Ui	V	660
额定频率 /Rated frequency f	Hz	50/60
介电耐受电压 /Dielectric withstand voltage	V	2500
额定短时耐受电流 /Rated short-time withstand current Icw	kA	50
额定峰值耐受电流 /Rated peak withstand current Ipk	kA	105
内部分隔形式 /Internal partition mode		2/3/4
防护等级 /Degrees of protection		IP 30/IP 40

## 柜型类别

### Cabinet Types

- 动力柜：配 LS 产电 Suslo 系列 AN、AS、AH 型框架 / 万能空气断路器；
  - 配电柜：配 LS 产电 Suslo 系列 TN、TS 型塑壳断路器和 EB 型漏电断路器；
  - 电容柜：配 LS 产电 Suslo 系列 AN、TS 型负荷开关和 GMC 电容专用接触器；
- Power cabinet: match the Susol series AN / AS / AH type versatile circuit breakers of LS Group;
  - Power distribution cabinet: match Susol series TN / TS type molded case circuit breakers and EB type leakage circuit breakers of LS Group;
  - Capacitor cabinet: match Susol series TN / TS type load switches and GMC type capacitor used contactors of LS Group.

## 柜体结构

### Cabinet Structure

- 动力柜分为母线室、设备室和电缆室等三个区域。水平母线布置在顶部，垂直母线位于后部。内部安全挡板将母线室和设备室隔开，也可使用单独的隔板将设备室和电缆室隔离。
- 配电柜分为母线室、设备室和电缆室等三个区域、母线室、设备室和电缆室配置安全挡板实施相互隔离。设备室的有效高度为 72E (1E=25mm)，各隔室之间相互隔离。电缆室位于后部，方便电缆的连接。

- The power cabinet is mainly composed of the bus cubicle, equipment cubicle, and cable cubicle. The horizontal bus is arranged at the top and the vertical bus is located at the back of the cabinet. The internal safety barrier separates the bus cubicle from the equipment cubicle. The equipment cubicle can be separated from the cable cubicle using isolation board.
- The power distribution cabinet is mainly composed of the bus cubicle, equipment cubicle, and cable cubicle as well. The three cubicles are separated using safety barriers. The effective height of the equipment cubicle is 72E (1E = 25mm). the cable cubicle is located at the back of the cabinet to facilitate cable connection.



## 产品特点

### Product Features

#### • 以技术性能高

主要技术性能指标达到先进水平。

#### • 结构通用

以专门开发的 85 型材为柜架，通用型强，满足各种结构形式、防护等级和使用环境的要求。

#### • 标准化程度高

采用模块化零部件、可供用户任意选用组装。

#### • 安全防护性能高

采用区域之间的分隔以及功能单位进出线的相互隔离、有效的提高安全防护功能。提供分隔形式 2 和 4，最高可达分隔形式 4。

有效防止事故蔓延，防止故障电弧向柜内其他间隔蔓延或溢出柜外。

有效保护人身安全。

#### • 操作维护方便

断路器插拔简便，互换性强。

电缆连接方便。

安装时间大大节省，且不需要特殊安装工具。

#### • High technical performance

The main technical performance reached advanced level.

#### • General structure

The 85 profile, which is developed specially for the cabinet, has general type and meets requirement of various structural forms, protection levels, and the operation environment.

#### • High degree of standardization

The variety of modular components allows users to assemble the cabinet as they require.

#### • High safety

The partitions of areas and the partitions by incoming and outgoing wires of function units effectively improve the safety and protection function. The cabinet can be partitioned into 2 or 4 areas; four areas are the most.

Effectively prevent the fault arc from spreading.

Effectively protect personal safety.

#### • Operation and maintenance convenience

The circuit breaker can be plugged / unplugged and interchanged with ease.

Cable connection is convenient.

Installation can be completed quickly and does not require other special installation tools.

## 柜架尺寸

### Cabinet Dimensions

柜型 Cabinet Type	宽度 Width (mm)	深度 Depth (mm)	高度 Height (mm)
动力柜 /Power cabinet	600/800/1000	800/1000	2200
配电柜 /Power distribution cabinet	600/800	800/1000	2200

有效高度 72E, 1E=25mm。/The effective height of the equipment cubicle is 72E (1E = 25mm).

## 配电柜尺寸选配表 (TN 和 TS 开关 / 侧装)

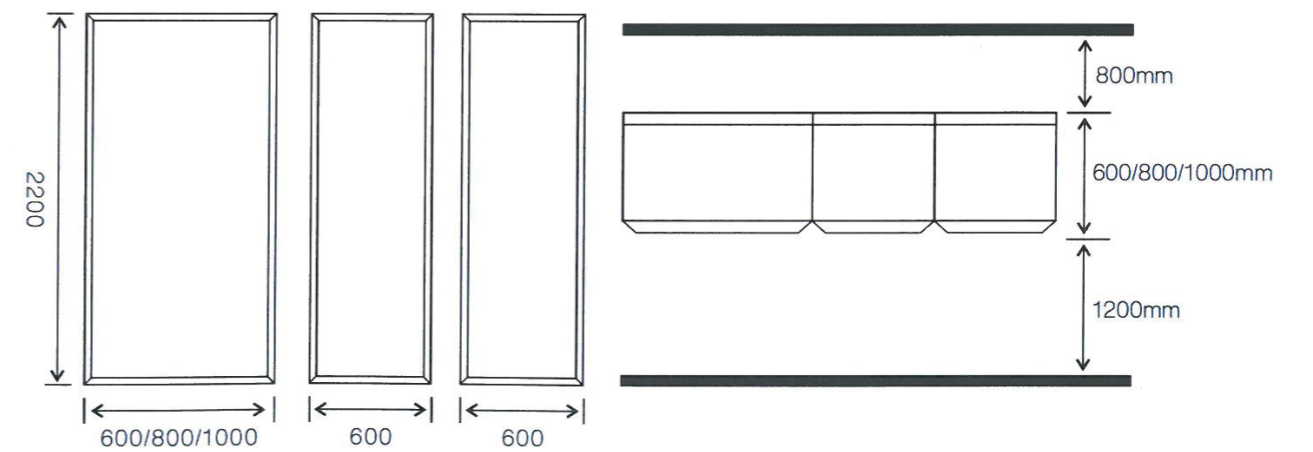
### Dimensional Specifications of Power Distribution Cabinet

### (TN and TS Switch / Lateral Installation)

额定电流 /Rated Current (A)	高度 /Height (mm)	模数 /Modulus
≤ 100/125/160/200/250/315	200	8E
400/500/630	400	16E
800	600	24E

## 安装尺寸 / 安装图

### Installation Sizes and Installation Diagram



## 一次主接线方案

### Primary Main Wiring Solution

方案编号 Solution No.	01H	01G	01F	01E	01D	01C	01B	01A
一次方案 Primary solution								
柜宽 (mm) Cabinet width	600	600	600	800	600	800	800	1000
柜深 (mm) Cabinet depth	600/800/1000	600/800/1000	800/1000	800/1000	800/1000	800/1000	800/1000	800/1000
单元高度 Unitary height	72E	72E	72E	72E	72E	72E	72E	72E
最大工作电流 (A) Max. operating current	1600	2000	3200	3200	4000	4000	4000	4000
主要设备 Main device	AH/AN-06-16D	AH-20D	AH/AS-20-32E	AH/AS-20-32E	AH/AS-40E	AH/AS-40E	AS-40F	AS-40F
用途 Use purpose	上进出线 3/4 级开关 Tri- or quad-polarity switch of up incoming or outgoing cable		上进出线 3 级开关 Tri-polarity switch of up incoming or outgoing cable	上进出线 4 级开关 Quad-polarity switch of up incoming or outgoing cable	上进出线 3 级开关 Tri-polarity switch of up incoming or outgoing cable	上进出线 4 级开关 Quad-polarity switch of up incoming or outgoing cable	上进出线 3 级开关 Tri-polarity switch of up incoming or outgoing cable	上进出线 4 级开关 Quad-polarity switch of up incoming or outgoing cable
备注 Remark	如有其它或特殊方案可与本公司协助解决 For other or special solution, negotiate with the manufacturer							

方案编号 Solution No.	02H	02G	02F	02E	02D	02C	02B	02A
一次方案 Primary solution								
柜宽 (mm) Cabinet width	600	600	600	800	600	800	800	1000
柜深 (mm) Cabinet depth	600/800/1000	600/800/1000	800/1000	800/1000	800/1000	800/1000	800/1000	800/1000
单元高度 Unitary height	72E	72E	72E	72E	72E	72E	72E	72E
最大工作电流 (A) Max. operating current	1600	2000	3200	3200	4000	4000	4000	4000
主要设备 Main device	AH/AN-06-16D	AH-20D	AH/AS-20-32E	AH/AS-20-32E	AH/AS-40E	AH/AS-40E	AS-40F	AS-40F
用途 Use purpose	下进出线 3/4 级开关 Tri- or quad-polarity switch of down incoming or outgoing cable		下进出线 3 级开关 Tri-polarity switch of down incoming or outgoing cable	下进出线 4 级开关 Quad-polarity switch of down incoming or outgoing cable	下进出线 3 级开关 Tri-polarity switch of down incoming or outgoing cable	下进出线 4 级开关 Quad-polarity switch of down incoming or outgoing cable	下进出线 3 级开关 Tri-polarity switch of down incoming or outgoing cable	下进出线 4 级开关 Quad-polarity switch of down incoming or outgoing cable
备注 Remark	如有其它或特殊方案可与本公司协助解决 For other or special solution, negotiate with the manufacturer							

## 一次主接线方案

### Primary Main Wiring Solution

方案编号 Solution No.	03H	03G	03F	03E	03D	03C	03B	03A
一次方案 Primary solution								
柜宽 (mm) Cabinet width	600	600	600	800	600	800	800	1000
柜深 (mm) Cabinet depth	600/800/1000	600/800/1000	800/1000	800/1000	800/1000	800/1000	800/1000	800/1000
单元高度 Unitary height	72E	72E	72E	72E	72E	72E	72E	72E
最大工作电流 (A) Max. operating current	1600	2000	3200	3200	4000	4000	4000	4000
主要设备 Main device	AH/AN-06-16D	AH-20D	AH/AS-20-32E	AH/AS-20-32E	AH/AS-40E	AH/AS-40E	AS-40F	AS-40F
用途 Use purpose	母线联络 3/4 级开关 Tri- or quad-polarity switch of bus contact		母线联络 3 级开关 Tri-polarity switch of bus contact	母线联络 4 级开关 Quad-polarity switch of bus contact	母线联络 3 级开关 Tri-polarity switch of bus contact	母线联络 4 级开关 Quad-polarity switch of bus contact	母线联络 3 级开关 Tri-polarity switch of bus contact	母线联络 4 级开关 Quad-polarity switch of bus contact
备注 Remark	如有其它或特殊方案可与本公司协助解决 For other or special solution, negotiate with the manufacturer							

方案编号 Solution No.	04C	04B	04A
一次方案 Primary solution			
柜宽 (mm) Cabinet width	600	600	600
柜深 (mm) Cabinet depth	600/800/1000	800/1000	1000
单元高度 Unitary height	24-72E	24E	24E
最大工作电流 (A) Max. operating current	2000	2000	2000
主要设备 Main device	AH/AN-06-20D	AH/AN-06-20D	AH/AN-06-20D
用途 Use purpose	电缆上下出线 Cable up & down outgoing deployment	电缆上下出线 Cable up & down outgoing deployment	电缆上下出线 Cable up & down outgoing deployment
备注 Remark	如有其它或特殊方案可与本公司协助解决 For other or special solution, negotiate with the manufacturer		

### 一次主接线方案

### Primary Main Wiring Solution

方案编号 Solution No.	05C	05B		05A		
一次方案 Primary solution						
柜宽 (mm) Cabinet width	600	600		800		
柜深 (mm) Cabinet depth	600/800/1000	1000		1000		
单元高度 Unitary height	24-72E	24E	24E	24E	24E	24E
最大工作电流 (A) Max. operating current	2000	2000	2000	2000	2000	2000
主要设备 Main device	AH/AN-06-20D	AH/AN-06-20D	AH/AN-06-20D	AH/AN-06-20D	AH/AN-06-20D	AH/AN-06-20D
用途 Use purpose	母线上下出线 Bus up outgoing deployment	母线上下出线 Bus up outgoing deployment		母线上下出线 Bus up outgoing deployment		
备注 Remark	如有其它或特殊方案可与本公司协助解决 For other or special solution, negotiate with the manufacturer					

方案编号 Solution No.	06C	06B	06A
一次方案 Primary solution			
柜宽 (mm) Cabinet width	600	800	600
柜深 (mm) Cabinet depth	800/1000	800/1000	800/1000
单元高度 Unitary height	6E	6E	8E
最大工作电流 (A) Max. operating current	160	160	630
最多出线回路数 Maximum number of outgoing circuit	12	24	9
主要设备 Main device	TD100/160	TD100/160	TS100/160/250/630
用途 Use purpose	电缆上下线 Cable up & down outgoing deployment	电缆上下线 Cable up & down outgoing deployment	电缆上下线 Cable up & down outgoing deployment
备注 Remark	如有其它或特殊方案可与本公司协助解决 For other or special solution, negotiate with the manufacturer		

### 一次主接线方案

### Primary Main Wiring Solution

方案编号 Solution No.	07C	07B	07A
一次方案 Primary solution			
柜宽 (mm) Cabinet width	600	600	600
柜深 (mm) Cabinet depth	800/1000	800/1000	800/1000
单元高度 Unitary height	6E	6E	6E
电流范围 (A) Current range	0.1-40	6-65	11-100
电机功率 (kW) power of motor	0.02-18.5	4-30	7.5-45
主要设备 Main device	MMS-32S(H)	MMS-63S(H)	MMS-100S(H)
最多出线回路数 Maximum number of outgoing circuit	12	12	9
用途 Use purpose	三相交流电动机直接启动保护 (AC-2, AC-3) Protecting the three-phase AC motor during direct startup (AC-2, AC-3)		
备注 Remark	如有正反转、星三角、自藕、软启动、变频等控制要求时, 柜体布置方案可与本公司协商解决。 If users require forward and reverse rotation, three-angle star, self-coupling, soft startup, or frequency conversion, negotiate with the manufacturer about cabinet arrangement solution.		

方案编号 Solution No.	08-10 (A/B/C)	08-9 (A/B/C)	08-8 (A/B/C)	08-7 (A/B/C)	08-6 (A/B/C)	08-5 (A/B/C)	08-4 (A/B/C)	08-3 (A/B/C)	08-2 (A/B/C)	08-1 (A/B/C)
一次方案 Primary solution										
柜宽 (mm) Cabinet width	600	600	600	600	600/800	800/1000	800/1000	800/1000	800/1000	800/1000
柜深 (mm) Cabinet depth	800/1000	800/1000	800/1000	800/1000	800/1000	800/1000	800/1000	800/1000	800/1000	800/1000
单元高度 Unitary height	72E	72E	72E	72E	72E	72E	72E	72E	72E	72E
单个补偿容量 Standalone compensated capacity	9.7kvar	12.5kvar	16.7kvar	18kvar	25kvar	33.3kvar	40kvar	40.5kvar	50kvar	60kvar
主要设备 Main device	GMC(D)-9C	GMC(D)-12C	GMC(D)-18C	GMC(D)-22C	GMC(D)-32C	GMC(D)-40C	GMC(D)-50C	GMC(D)-65C	GMC(D)-75C	GMC(D)-85C
单柜回路数 Number of circuits for single cabinet	8/10/12	8/10/12	8/10/12	8/10/12	8/10/12	8/10/12	8/10/12	8/10/12	8/10/12	8/10/12
用途 Use purpose	无功补偿 Reactive power compensation									
备注 Remark	如有其它或特殊方案可与本公司协助解决 For other or special solution, negotiate with the manufacturer									