



KLD系列 series



KLD-125-160/4SZ



KLD系列 series

### 适用范围 Application

NH40SZ自动转换隔离开关, 适用于交流50Hz、交流额定电压660V及以下、直流额定电压440V及以下、额定电流至1600A、三相四线制供电系统。能实现常用电源与备用电源的自动和手动切换, 在切换电源过程中, 中断向负载供电。适用于要求两路电源供电和对电源质量要求高的场合。

KLD automatic transfer switch is applicable for three-phase four-wire power supply system of AC50Hz, AC rated voltage 660V and below, DC rated voltage 440V and below, rated current up to 1600A.

It is able to realize automatic and manual transfer between normal power and reserve power, during transferring, it will stop supplying power to the loads.

It is applicable for occasions that require two circuits of power supply and has high demand to the power source.

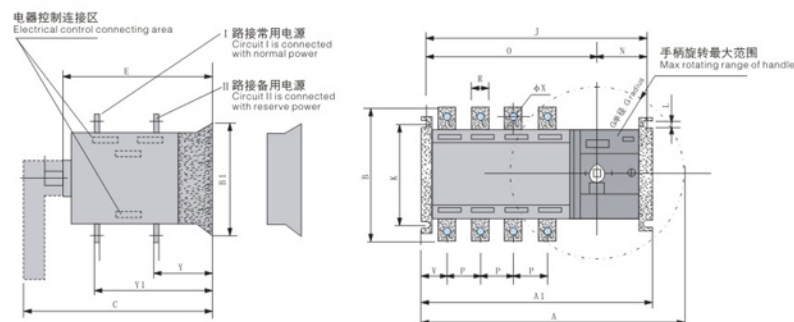
### 型号及含义 Model description

- NH40-□/□SZ□
- 无字符: 普通型; 主电源—备用电源、自投自复
  - Blank: normal power-reserve power, automatic put-in automatic restoring
  - I: 市电—市电、互为备用、缺相保护
  - I: utility power-utility power, standby for each other, open-phase protection
  - II: 市电—市电、自投自复、过欠电压保护
  - II: utility power-utility power, automatic put-in automatic restoring, over/under-voltage protection
  - III: 市电—油机、自投自复、过欠电压保护
  - III: utility power-diesel engine, automatic put-in automatic restoring, over/under-voltage protection
  - 双电源转换开关Dual-power transfer switch
  - 3: 三极 three-pole
  - 4: 四极 four-pole
  - 约定发热电流 Conventional thermal current
  - 设计代号 Design code
  - 隔离开关 Disconnecting switch
  - 企业代号 Enterprise code

### KLD 主要参数 Main parameters of KLD

约定发热电流(A) Conventional thermal current	125	160	200	250	315	400	630	1000	1250	1600	
GG熔断体额定电流(A) Rated current of GG fuse link	125	160	200	250	315	400	630	1000	1250	2 × 800	
额定绝缘电压(V) Rated insulation voltage	800										
额定工作电流(V) Rated current	380V AC20	125	160	200	250	315	400	630	1000	1250	1600
	380V AC21	125	160	200	250	315	400	630	-	-	-
	660V AC20	125	160	200	250	315	400	630	1000	1250	1600
	660V AC21	100	160	160	200	315	315	500	-	-	-
	220V DC20	125	160	200	250	315	400	630	1000	1250	1600
	220V DC21	125	160	200	250	315	400	630	-	-	-
	440V DC20	125	160	200	250	315	400	630	1000	1250	1600
	440V DC21	100	160	160	200	315	315	500	-	-	-
操作力 N Operating physical force N	40-60		65-100		75-120			200-300			

### KLD自动转换隔离开关安装尺寸 Installation size of KLD automatic transfer disconnecting switch





KLD-200-250/4SZ



KLD-315/4SZ



KLD-400/4SZ

规格 Spec.	安装尺寸(mm) Installation size of														
电流 Current	A	A1	B	C	E	J	K	L	N	P	R	V	ΦX	Y	Y1
125A/3	405	270	135	240	208	255	95/110	7	87	36	20	20	9	58	135
160A/3	405	270	135	240	208	255	95/110	7	87	36	20	20	9	58	135
125A/4	435	300	135	240	208	285	95/110	7	87	36	20	20	9	58	135
160A/4	435	300	135	240	208	285	95/110	7	87	36	20	20	9	58	135
200A/3	416	310	170	240	208	293	95/110	7	87	50	25	27	11	60	140
250A/3	416	310	170	240	208	293	95/110	7	87	50	25	27	11	60	140
200A/4	466	360	170	240	208	343	95/110	7	87	50	25	27	11	60	140
250A/4	466	360	170	240	208	343	95/110	7	87	50	25	27	11	60	140
315A/3	465	375	240	315	270	355	180	11	95	65	32	37.5	11	84	195
400A/3	465	375	240	315	270	355	180	11	95	65	32	37.5	11	84	195
630A/3	465	375	260	315	270	355	180	11	95	65	40	37.5	13	84	195
315A/4	525	435	240	315	270	415	180	11	95	65	32	37.5	11	84	195
400A/4	525	435	240	315	270	415	180	11	95	65	32	37.5	11	84	195
630A/4	525	435	260	315	270	415	180	11	95	65	40	37.5	13	84	195
1000A/3	887	515	310	368	321	490	220	13	88	120	60	198	13	108	252
1250A/3	887	515	360	368	321	490	220	13	88	120	80	198	13	108	252
1600A/3	887	515	360	368	321	490	220	13	88	120	80	198	13	108	252
1000A/4	1007	635	310	368	321	610	220	13	88	120	60	198	13	108	252
1250A/4	1007	635	360	368	321	610	220	13	88	120	80	198	13	108	252
1600A/4	1007	635	360	368	321	610	220	13	88	120	80	198	13	108	252

### 控制特性 Control characteristics

开关具有三极、四极(三极+可通断中性极)产品。

四种控制类型(普通型、I、II、III)。

- a.普通型：主电源—备用电源、自投自复。
- b. I：市电—市电、自投自复、缺相检测。
- c. II：市电—市电、自投自复、过欠电压检测。
- d. III：市电—油机、自投自复、过欠电压、频率检测。

由钥匙开关选择操作方式。

可挂锁保持位置状态。

B 普通型开关控制特性：

- a.开关适用于主电源—备用电源供电系统的自投自复。

I 型开关控制特性：

- a.开关适用于市电—市电主供电系统的自投自复，主电源投向备用电源(延时连续可调 1\_16s)，备用电源投向主用电源(延时连续可调1\_250s)。
- b.缺相检测功能。
- c.通过接插端子选择优选开关。

II 型开关控制特性：

- a.开关适用于市电—市电的供电系统的自投自复，主电源投到备用电源(连续可调1\_16s)，备用电源投到主电源(连续可调1\_250s)。
- b.通过接插端子选择优选开关。
- c.过欠压检测功能。

III 型控制特性：

- a.开关适用于市电—油机供电系统的自投自复，市电投向油机供电系统时，开关首先发出启动油机信号，具有油机电压检测，油机频率检测，延时8s启动，油机暖机延时(连续可调0\_250s)等功能，油机投回市电，具有返回延时(连续可调0\_250s)功能，油机冷机延时(连续可调0\_250s)后关闭。
- b.市电、油机三相过、欠电压保护，油机频率检测等功能。

The switch includes three-pole and four-pole (three-pole + neutral pole with make/break function) products.

Four control types (B, I, II and III).

- a. B: normal power-reserve power, automatic put-in automatic restoring.
- b. I: utility power-utility power, automatic put-in automatic restoring, open-phase detection.
- c. II: utility power-utility power, automatic put-in automatic restoring, over/under-voltage detection.
- d. III: utility power-diesel engine, automatic put-in automatic restoring, over/under-voltage detection, frequency detection.

Select operating mode by key switch

Padlock keeping position state is available

B Control characteristics of B type switch

- a. The switch is applicable for automatic put-in automatic restoring of normal power-reserve power supply system.

I Control characteristics of I type switch

- a. The switch is applicable for automatic put-in automatic restoring of utility power-utility power normal and standby power supply system, transfer from normal power to standby power (delay time is continuously adjustable 1-16s), transfer from standby power to normal power (delay time is continuously adjustable 1-250s).

b. Open-phase detection.

c. Select priority switch through connection terminals.

II Control characteristics of II type switch

- a. The switch is applicable for automatic put-in automatic restoring of utility power-utility power supply system, transfer from normal power to standby power (continuously adjustable 1-16s), transfer from standby power to normal power (continuously adjustable 1-250s).

b. Select priority switch through connection terminals.

III Control characteristics of III type switch

- a. The switch is applicable for automatic put-in automatic restoring of utility power-diesel engine power supply system, when transferring from utility power to diesel engine power supply system, the switch will send out starting signal of diesel engine first, with functions of diesel engine voltage detection and frequency detection, startup after 8s of time delay, warming-up time delay (continuously adjustable 0-250s) of diesel engine, etc, when transferring back to utility power from diesel engine, with functions of return time delay (continuously adjustable 0-250s), diesel engine is shut down after cooling-down time delay (continuously adjustable 0-250s).

- b. Functions of three-phase over/under-voltage protection of utility power and diesel engine, frequency detection of diesel engine, etc.

以上4种开关均具有：

- a. 自动、遥控、手动控制功能
- b. 延时0.5s 检测信号，防止误动作。
- c. 自动状态具有远程控制“0”位。
- d. 钥匙开关选择操作方式。
- e. 可配RS-485通讯接口(选配件)，可根据用户需要进行配置。

All the above four types of switch have the following functions:

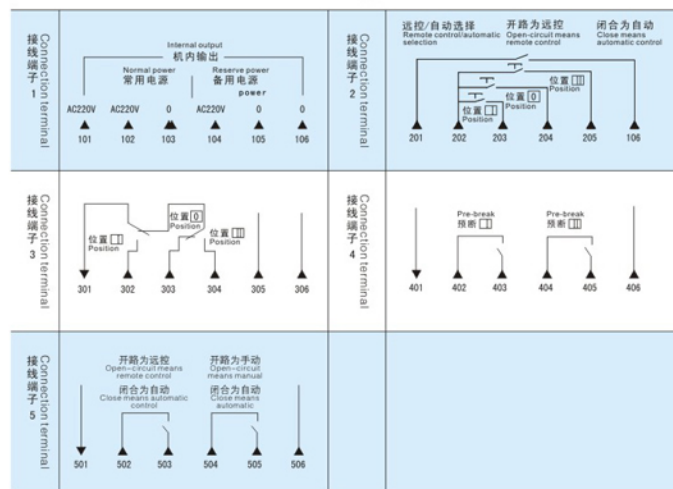
- a. Automatic, remote control and manual control functions
- b. Detect signal after 0.5s of time delay, preventing misoperation.
- c. When in automatic state, it is able to remote control position “0”.
- d. Key switch selects operation mode
- e. It can be equipped with RS-485 communication interface (optional) at request.



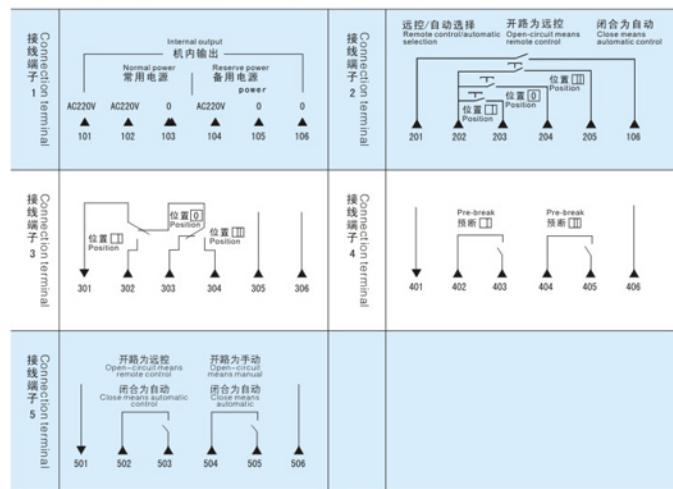
KLD-630/4SZ

### KLD-125~1600/SZ 自动转换开关控制电路接插端子 Control circuit connection terminal of KLD-125~1600 automatic transfer switch

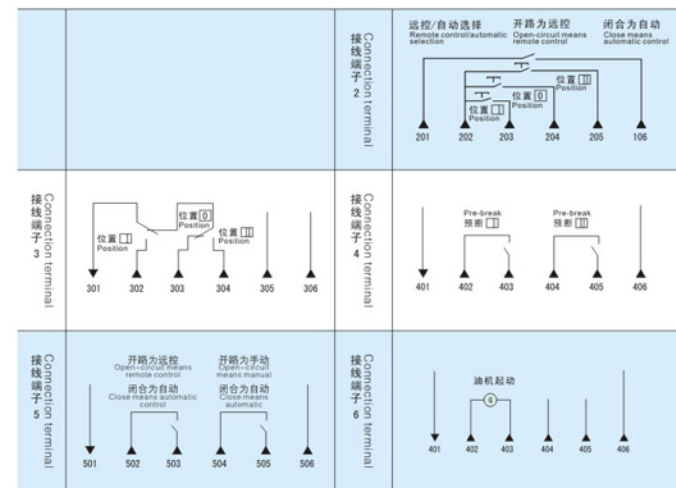
#### B型控制电路接线端子 Connection terminal of B type control circuit



#### I、II型控制电路接线端子 Connection terminal of I and II types of control circuit



#### III型控制电路接线端子 Connection terminal of III type control circuit



#### 接线端子1主备选择

- 101、106—机内220VAG输出端子(仅适用于“B”型)。
- 102、103—路电源控制端子(仅适用“B”型)。
- 104、105—II路电源控制端子(仅适用“B”型)。
- 102、103—优先选择开关K，用于设定任一电源电路为主电源，另一路即为备用电源，K断开、开关优先、K闭合、开关II优先，对K开关的触点容量无要求；(仅适用于I型或II型控制形式的产品，不安装开关K，相当于断开开关K)

#### 接线端子2远程控制

- 201、206—远程控制与自动转换开关K端子，用于设定远程控制、自动控制功能转换开关，开路为远程控制，闭合为自动控制。
- 202、203—闭合开关I。
- 202、204—两个开关全断开，置于0位。(包括优先置“O”)。
- 202、205—闭合开关II

#### 接线端子3位置指示与零线端子

- 301、302 指示开关位置。
- 301、303—全部断开指示“0”位指示
- 301、304—指示开关II位置。
- 305 I、II型，开关I控制电路零线“N1”，III型，开关I控制电路零线“N”(仅适用于3极)。
- 306—I、II型，开关II控制电路零线“N2”，III型，开关II控制电路零线“N(G)”(仅适用于3极)。

#### 接线端子4预断开辅助触点

- 402、403 指示开关I预断位置。
- 404、405 指示开关II预断位置。

#### 接线端子5手动、自动操作方式和是否锁住开关指示

- 502、503—指示自动、手动操作方式。
- 504、505—指示是否锁住开关，

#### 接线端子6控制油机

- 602、603—启动柴油发电机组端子。(仅适用III型)
- 如果是三相开关，一定将两条电源电路的零线N分别接到开关右侧305、306端子上(1-1.5mm<sup>2</sup>铜线)