

GCK

低压抽出式开关柜

Low voltage withdrawable switchgear

吾心求索·通享未来

得益于多年的电气产品研发和制造经验，索通电气为您提供结合了先进技术和卓越工程设计的高压开关设备；系列产品符合智能化、安全性和可靠性要求最严苛的标准。该系列能为公共配电、工业和楼宇领域提供极具成本效益的解决方案，提高竞争力。



节能型
Energy Saving



智能化
Intellectualization



易维护
Easy Maintenance



安全性
Safety

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产品概述 General

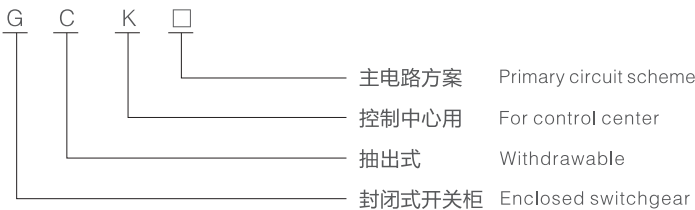
GCK 低压抽出式开关柜广泛适用于发电厂、冶金轧钢、石油化工、轻工纺织、港口码头、大楼宾馆等场所作为交流三相四线或五线制、电压380V、660V，频率为50Hz、额定电流为5000A及以下的供电系统中的配电和电动机集中控制之用。

本产品符合GB7251.12-2013《低压成套开关设备和控制设备》，IEC61439-2:2011《低压成套开关设备和控制设备》等标准的要求。

GCK Low voltage withdrawable switchgear is widely used in power generating plant, metallurgy rolled steel, textile, seaport and dock, high building, hotel and etc, operating in the system of AC 3-phase 4-wire or 5-wire, voltage 380V, 660V, frequency 50Hz, rated current 5000A and below, to distribute electricity and centrally control motors.

Comply with GB7251.12-2013 Low voltage switchgear and controlgear, IEC61439-2:2011 Low voltage switchgear and controlgear standard.

型号及含义 Model and meaning



正常使用条件 Normal service conditions

- 环境温度：上限+40℃，下限-15℃(特殊工艺下，可达-45℃)；
- 海拔高度不超过2500m(特殊工艺下，可达4000m)；
- 相对湿度在最高温度+40℃时不超过50%，在较低温度时允许有较高的相对湿度，如+20℃时为90%；
- 空气清洁，无腐蚀性及爆炸性气体，无导电及能破坏绝缘的尘埃；
- 无显著摇动和冲击振动的场合，垂直安装，倾斜度不应大于5度；
- 开关柜适用于以下温度运输和储存：-25℃至+55℃，在短时间内(不超过24小时)不超过+70℃；
- 注：超出上述正常使用条件时，用户可与制造厂协商确定。
- Ambient air temperature:
Maximum air temperature: +40℃,
Minimum air temperature: -15℃ (Under a special process, up to -45℃);
- Altitude: ≤ 2500m(Under a special process, up to 4000m);
- Relative humidity not exceed 50% at the max temperature of +40℃, higher relative humidity is allowable under lower temperature. For example, RH could be 90% at +20℃, while special measures shall be taken for the condensation occasionally produced due to temperature change.
- Storage ambient temperature: -25℃~+55℃; No greater than +70℃ with in 24 hours.
- The ambient air is not significantly polluted by dust, smoke, corrosive and/or flammable gases, vapours or salt.
- Notes: If the operating conditions exceed the normal conditions, please contact our technical department.

低压抽出式开关柜

Low voltage withdrawable switchgear



主要技术参数 Technical specifications

基本技术参数见表 Main technical data of the switchgear		
名称 Description	单位 Unit	参数 Specifications
额定绝缘电压 Rated insulation voltage	V	660/1000
额定工作电压 Rated operating voltage	V	4400/660
辅助电路额定工作电压 Rated operating voltage of auxiliary circuit	V	AC380、220, DC110、220
母线额定电流 Rated busbar current	A	1000、1250、1600、2000、2500、3200、4000、5000
母线额定短时耐受电流(有效值) 1秒 Rated short time withstand current of busbar (1s rms)	kA	50、80
母线额定峰值耐受电流 Rated peak withstand current of busbar	kA/0.1s	105、140、176
分支母线额定电流 Rated branch busbar current	A	630、1000、1250、1600
分支母线额定短时耐受电流(有效值) 1秒 Rated short time withstand current of Branch busbar (1s rms)	kA	30kA、50kA
分支母线额定峰值耐受电流 Rated peak withstand current of branch bus	kA/0.1s	63kA、105kA/0.1s
外壳防护等级 Degree of protection		IP30、IP40
母线设置 Bus Setup		三相四线制、三相五线制 Three phase four-wire, Three phase five-wire
操作方式 Operation		就地、远方、自动 Local, Distance, Automatic

开关柜的分类 Panel type

- 受电柜 Receiving panel
- 母线联络柜 Busbar coupler panel
- 馈电柜 Feeding panel
- 电动机控制柜 Motor control panel
- 电源切换柜 Power transfer panel
- 功率因数补偿柜 Power factor compensation panel



外形及安装尺寸 Structure and Dimensions

外形尺寸见表 Dimensions (see table)
安装GCK(L) 系列开关柜属非靠墙垂直安装，其后面为柜体的出线电缆沟，为便于维护，后面距墙通常为800~1200mm，正面距离安装见下图。
The installation of GCK(L) series switchgear can't be mounted closing to wall, its back is for tunnel of cable outgoing, in order to make maintenance convenient, the back distance between wall and switchgear generally is 800~1200mm, front distance and installation refer to following Figure.

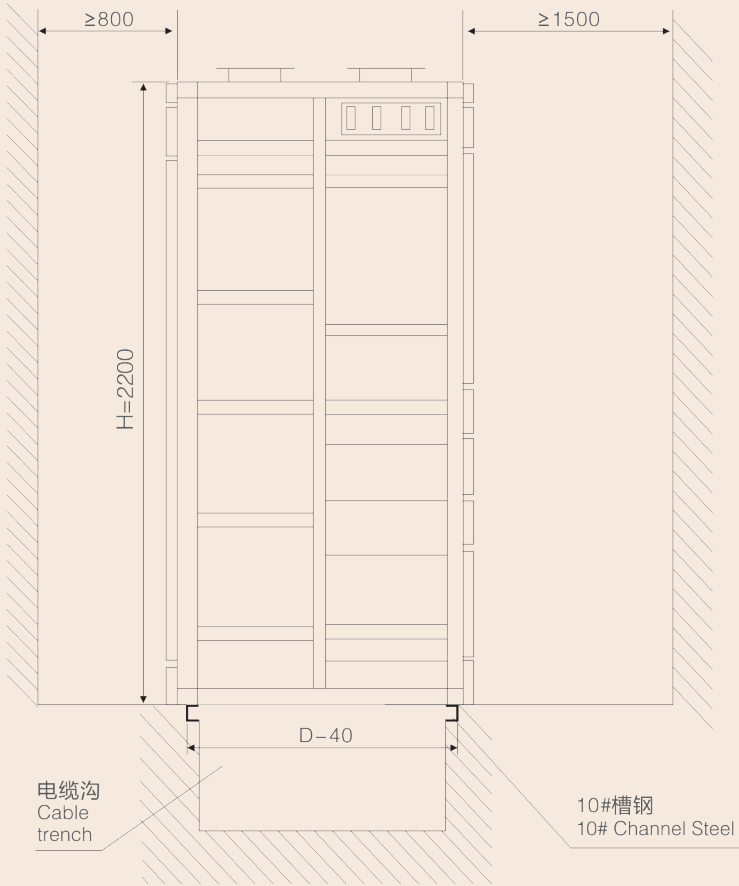
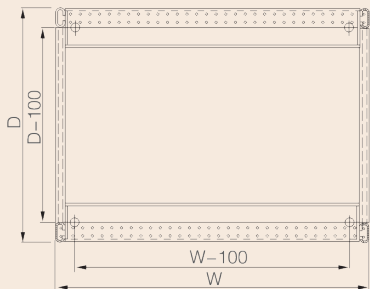
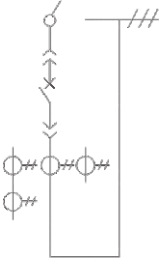
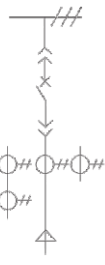
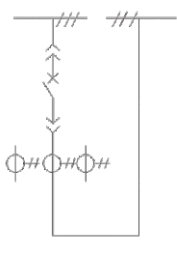


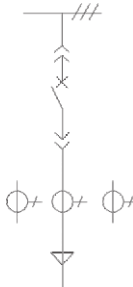
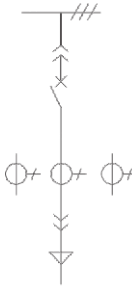
表 Table

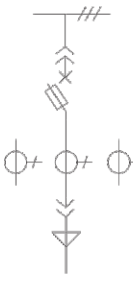
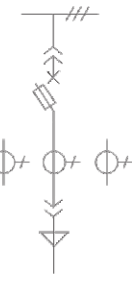
柜宽(W)	柜深(D)	柜高(H)
600, 800, 1000	800, 1000	2200

一次回路方案图 Typical primary schemes

方案编号 No.		01	02	03	04
一次方案 Primary circuit scheme					
用途 Application		架空受电 Overhead receiving	电缆 Cable	母线 Busbar	
柜宽 Panel width		600、800、1000	600、800、1000	600、800、1000	
小室高度 Compartment height		1280	1280	1280	
主要电器设备 Main components	断路器 Breaker	ME-630~3900A NA1-630~4000A GEKW1-630~5000A AH-630~5000A DW17-630~3900A			
	电流互感器 Current transformer	LMK-0.66			
备注 Remark		当额定电流超过4000A，用户应与制造厂协商 When rated current is more than 4000A, please discuss with manufacturer.			

一次回路方案图 Typical primary schemes

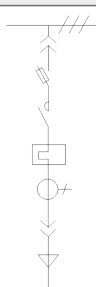
方案编号 No.		05		06				
一次方案 Primary circuit scheme								
用途 Application		馈电 Feeding		馈电 Feeding				
柜宽 Panel width		600、800		600、800				
小室高度 Compartment height		840	840	200	300	400	400	600
主要 电器 设备 Main components	断路器 Breaker	ME630A ME800A ME1000A ME1250A ME1650A NA1-630~2000A GEKW1-2000A及以下		NM1-100, NM1-225 NM1-400 NS10, NS160 NS200, NS400 GEKM1-100 GEKM1-160		NM1-400, NM1-630 NS250, NS400 NS630 GEKM1-225 GEKM1-400 GEKM1-630		
	电流互感器 Current transformer	LMK-0.66		LMK-0.66				
备注 Remark		800宽每台可装两个回路 Each switchgear with width 800mm can install two feeders (loops)		选用元件时请注意发热降容 When to select electric components, please take care of overheating and derating.				

方案编号 No.		07				08	
一次方案 Primary circuit scheme							
用途 Application		馈电 Feeding		馈电 Feeding		馈电 Feeding	
柜宽 Panel width		600、800		600、800		600、800	
小室高度 Compartment height		200	300	400	400	600	600
主要 电器 设备 Main components	隔离开关 Isolation switch	QSA63 QSA125 QSA160		QSA250 QSA400		QSA630	
	电流互感器 Current transformer	LMK-0.66				LMK-0.66	
备注 Remark		选用元件时请注意发热降容 When to select electric components, please take care of overheating and derating.				固定式、每柜可装三个回路 The fixed type switchgear can assemble three feeders (loops)	

一次回路方案图 Typical primary schemes

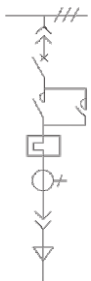
方案编号 No.		09			
一次方案 Primary circuit scheme					
用途 Application		电动机控制 Motor control			
柜宽 Panel width		600、800			
小室高度 Compartment height		200	200	400	600
主要电器设备 Main components	断路器 Breaker	NM1-100 NS100 GEKM1-100	NM1-100 NS100 GEKM1-100	NM1-225 NS250 GEKM1-225	NM1-225 NS250 GEKM1-225
	接触器 Contacts	B9~B45	B45~B85	B105~B170	B250
	热继电器 Thermal relay	T16~T45	T45~T105	*T16	*T16
	电流互感器 Current transformer	LMK-0.66	LMK-0.66	LMK-0.66	LMK-0.66
备注 Remark		≤11kW	≤30kW	≤50kW	≤90kW
		根据每柜回路数，选用电器应考虑发热降容 According to number of feeders every switchgear, please take care of overheating and derating when to select the electric apparatus.			

* 采用电流互感器二次回路保护方式 The protection of secondary circuit of CT adopted

方案编号 No.		10			
一次方案 Primary circuit scheme					
用途 Application		可逆电动机控制 Reversible motor control			
柜宽 Panel width		600、800			
小室高度 Compartment height		200	200	400	
主要电器设备 Main components	熔断器开关 Fuse switch	QSA63	QSA125	QSA250	
	接触器 Contacts	B9~B45	B45~B85	B105~B170	
	热继电器 Thermal relay	T16~T45	T45~T105	*T16	
	电流互感器 Current transformer	LMK-0.66	LMK-0.66	LMK-0.66	
备注 Remark		≤15kW	≤30kW	≤55kW	
		根据每柜回路数，选用电器应考虑发热降容 According to number of feeders every switchgear, please take care of overheating and derating when to select the electric apparatus.			

* 采用电流互感器二次回路保护方式 The protection of secondary circuit of CT adopted

一次回路方案图 Typical primary schemes

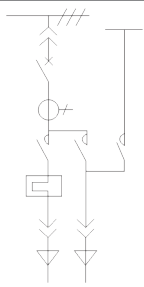
方案编号 No.		11			
一次方案 Primary circuit scheme					
用途 Application		可逆电动机控制 Reversible motor control			
柜宽 Panel width		600、800			
小室高度 Compartment height		200	200		600
主要电器设备 Main components	断路器 Breaker	NM1-100 NS100 GEKM1-100	NM1-100 NS100 GEKM1-100		NM1-225 NS250 GEKM1-225
	接触器 Contacts	B9~B45	B45~B85		B105~B170
	热继电器 Thermal relay	T16~T45	T45~T105		*T16
	电流互感器 Current transformer	LMK-0.66	LMK-0.66		LMK-0.66
备注 Remark		≤11kW	≤30kW		≤90kW
		根据每柜回路数，选用电器应考虑发热降容 According to number of feeders every switchgear, please take care of overheating and derating when to select the electric apparatus.			

* 采用电流互感器二次回路保护方式 The protection of secondary circuit of CT adopted

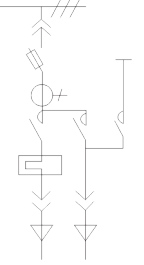
方案编号 No.		12			
一次方案 Primary circuit scheme					
用途 Application		可逆电动机控制 Reversible motor control			
柜宽 Panel width		600、800			
小室高度 Compartment height		200	200	400	
主要电器设备 Main components	熔断器开关 Fuse switch	QSA63	QSA125	QSA250	
	接触器 Contacts	B9~B45	B45~B85	B105~B170	
	热继电器 Thermal relay	T16~T45	T45~T105	T105~T170	
	电流互感器 Current transformer	LMK-0.66	LMK-0.66	LMK-0.66	
备注 Remark		≤15kW	≤30kW	≤55kW	
		根据每柜回路数，选用电器应考虑发热降容 According to number of feeders every switchgear, please take care of overheating and derating when to select the electric apparatus.			

* 采用电流互感器二次回路保护方式 The protection of secondary circuit of CT adopted

一次回路方案图 Typical primary schemes

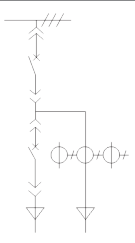
方案编号 No.		13			
一次方案 Primary circuit scheme					
用途 Application		Y-△电动机控制 motor control			
柜宽 Panel width		600、800			
小室高度 Compartment height		200	200	400	600
主要电器设备 Main components	断路器 Breaker	NM1-100 NS100 GEKM1-100	NM1-100 NS100 GEKM1-100	NM1-100 NS250 GEKM1-100	NM1-225 NS250 GEKM1-225
	接触器 Contacts	B9~B45	B45~B85	B85~B105	B105~B170
	热继电器 Thermal relay	T16~T45	T45~T105	*T16	*T16
	电流互感器 Current transformer	LMK-0.66	LMK-0.66	LMK-0.66	LMK-0.66
备注 Remark		≤11kW	≤30kW	≤37kW	≤55kW
		根据每柜回路数，选用电器应考虑发热降容 According to number of feeders every switchgear, please take care of overheating and derating when to select the electric apparatus.			

* 采用电流互感器二次回路保护方式 The protection of secondary circuit of CT adopted

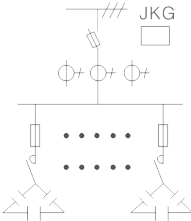
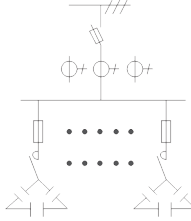
方案编号 No.		14			
一次方案 Primary circuit scheme					
用途 Application		Y-△电动机控制 motor control			
柜宽 Panel width		600、800			
小室高度 Compartment height		400	400	600	
主要电器设备 Main components	熔断器开关 Fuse switch	QSA63	QSA125	QSA250	
	接触器 Contacts	B9~B45	B45~B85	B105~B170	
	热继电器 Thermal relay	T16~T45	T45~T105	*T16	
	电流互感器 Current transformer	LMK-0.66	LMK-0.66	LMK-0.66	
备注 Remark		≤15kW	≤30kW	≤55kW	
		根据每柜回路数，选用电器应考虑发热降容 According to number of feeders every switchgear, please take care of overheating and derating when to select the electric apparatus.			

* 采用电流互感器二次回路保护方式 The protection of secondary circuit of CT adopted

一次回路方案图 Typical primary schemes

方案编号 No.		15	16
一次方案 Primary circuit scheme			
用途 Application		电流切换 Current conversion	
柜宽 Panel width		600	
小室高度 Compartment height		1800	
主要电器设备 Main components	断路器 Breaker	DW17-630~1900A NA1-630~2000A ME-630~1900A GEKW1-630~2000A	
	电流互感器 Current transformer	LMK-0.66	
备注 Remark		电器联锁自动或手动切换 Shift between auto or manual electric interlock	

* 采用电流互感器二次回路保护方式 The protection of secondary circuit of CT adopted

方案编号 No.		17		18	
一次方案 Primary circuit scheme					
用途 Application		功率因数补偿 Power factor compensation		功率因数补偿 Power factor compensation	
柜宽 Panel width		800	1000	800	1000
小室高度 Compartment height		1840		1840	
主要电器设备 Main components	刀熔开关 Fuse switch	QSA~400		QSA~400	QSA~630
	熔断器 Fuse	RT14		RT14	RT14
	接触器 Contacts	CJ19		CJ19	CJ19
	电流互感器 Current transformer	LMK-0.66		LMK-0.66	LMK-0.66
	电容器 Capacitors	BSMJ0.4~16~3		BSMJ0.4~16~3	BSMJ0.4~25~3
	无功功率补偿控制器 Reactive power compensation controller	JKG(F)		JKG(F)	
	补偿容量 Compensating capacity	(96kVar) (128kVar) (160kVar)		(96kVar) (128kVar) (160kVar)	(200kVar) (250kVar)
备注 Remark		干式电容器功率因数自动、手动调节。(主柜) Auto or manual compensate/improve power factor by dry type capacitors (main switchgear)		干式电容器功率因数随主柜控制器自动、手动调节。(辅柜) Power factory adjusted automatically or manually through the controller in main switchgear and dry type capacitors (aux. switchgear)	

* 采用电流互感器二次回路保护方式 The protection of secondary circuit of CT adopted