

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

MNS
 低压抽出式开关柜
 Low voltage withdrawable switchgear



产品概述 General

MNS型低压抽出式开关柜(以下称开关柜)是我公司参考了瑞士ABB公司的MNS系列低压开关柜并加以综合改进后开发的,是目前国内较先进的低压抽出式开关设备。该产品均由标准化的、成系列的模块组成,并且抽屉具有可靠的机械联锁装置,使用户在使用时更安全、更可靠。

本开关柜适用于交流50(60)Hz、额定工作电压400V、660V,额定电流5000A及以下三相五线制的电力供电系统,可用于发电厂、变电所、工矿企业、大楼宾馆、机场、码头以及广播电视等通信中心,来作为发电、输配电、电能转换及电能消耗设备的控制,并通过电容补偿柜对其主母线进行无功补偿。

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。

MNS series low voltage withdrawable switchgear (hereinafter called "switchgear") is improved and developed by our company referring to MNS series switchgear of Swiss ABB, is one of advanced low voltage draw-out switchgear. This product consists of standardized modules, furthermore each withdrawable unit has reliable mechanical interlock device, make it more safe and reliable during operating.

This series of switchgear is suitable for operating in the 3-P, 5-W power distribution system of AC 50(60) Hz, rated working voltage 400V, 660V, rated current 5000A and below, for power generating plant, substation, mineral enterprises, building or hotel, airport, dock, broadcast TV center and etc, used for power generation, transmission and distribution, transfer electric energy and the control of electric consumers, moreover capacitor bank can compensate the reactive power for their system.

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



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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)；
- 周围空气相对湿度在最高温度为+40℃时不超过50%，在较低温度时有较高的相对湿度，如+20℃时为90%，但考虑到由于温度的变化有可能会偶然产生适度的凝露。
- 应安装在无剧烈震动和冲击，以及不使用电器元件受到腐蚀的场所。
- 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 °C);
- 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.
- 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.

主要技术参数 Technical specifications

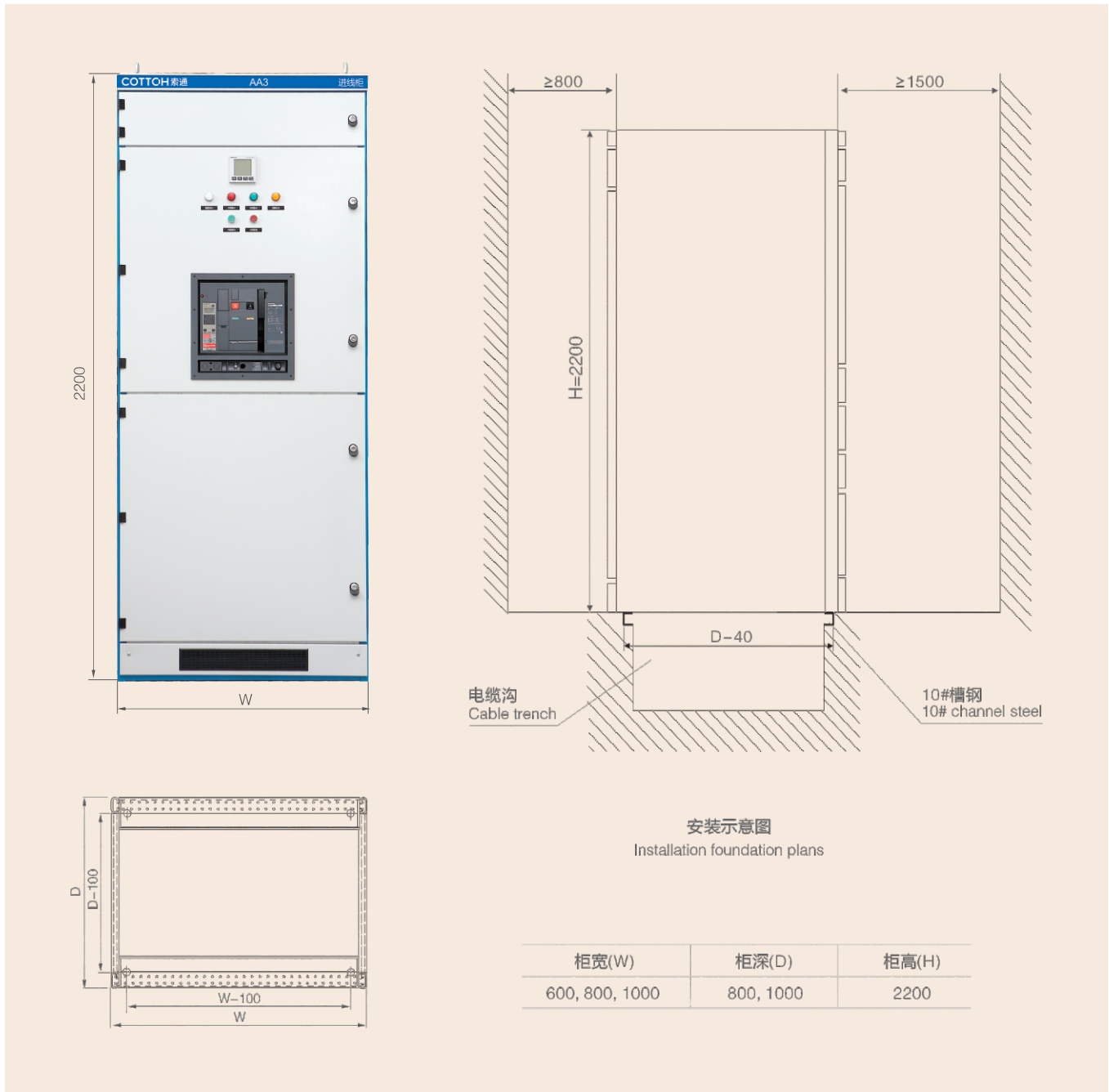
开关柜主要技术参数 Main technical data of the switchgear

过电压类别 Overvoltage category	IV III	
污染等级 Pollution Degree	3	
额定工作电压(Ue)(V) Rated operating voltage	400/660	
额定绝缘电压(Ui)(V) Rated insulation voltage	660/1000	
额定频率(Hz) Rated frequency	50(60)	
水平母线 Horizontal busbar	额定电流 Rated Current	≤5000A
	额定短时耐受电流(Icw)(kA) Rated short-time withstand current	50,65,80(1s有效值rms)
	额定峰值耐受电流(Ipk)(kA) Rated peak withstand current	105, 140, 176(0.1s最大值Maximum)
垂直母线 Vertical busbar	额定最大工作电流 Rated maximum operating current	≤1000A
	额定短时耐受电流 Rated short-time withstand current	50kA
	额定峰值耐受电流 Rated peak withstand current	105kA
外壳防护等级 Degree of protection	IP30 IP40(特殊说明 special Instructions)	



外形及安装尺寸 Structure and Dimensions

- 外形尺寸见表
- 安装MNS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。
- Dimensions as table
- The installation of MNS 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 Figure .



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				
柜宽(1) Panel width(1)	32E 40E	24E 32E 40E	24E 32E	32E 40E
柜宽(2) Panel width(2)	32E 40E	24E 32E 40E	24E 32E	32E 40E
设备室高 Compartment height	72E	72E	72E	72E
最大工作电流(A) Max.operating current	2000 × 2	4000	4000	4000
主要设备 Main components	GEKW1 CW1-630~4000A(3P) BH-0.66	GEKW1 CW1-630~4000A BH-0.66	GEKW1 CW1-630~4000A BH-0.66	GEKW1 CW1-630~4000A BH-0.66
用途 Application	电缆进出线 Cable Incoming/outgoing feeder		柜顶进出线 Roof Incoming/outgoing feeder	母联 Busbar coupler

方案编号 No.	05	06	07	08	09	10	11	12
一次方案 Primary circuit scheme								
柜宽(1) Panel width(1)	40E		40E				40E	
柜宽(2) Panel width(2)	24E 32E		24E 32E				24E 32E	
设备室高 Compartment height	8E/4	8E/2	8E	16E	24E	8E	16E	24E
最大工作电流(A) Max.operating current	32	63	225	400	630	225	400	630
主要设备 Main components	C65 BH-0.66	GEKM1-63 CM-100 BH-0.66	GEKM1-100 GEKM1-250 BH-0.66	GEKM1-400 BH-0.66	GEKM1-630 BH-0.66	GEKM1-100 GEKM1-250 BH-0.66	GEKM1-400 BH-0.66	GEKM1-630 BH-0.66
用途 Application		馈线 Feeding					母联 Busbar coupler	

注：柜宽(1)适用于电缆侧出线方案，柜宽(2)适用电缆后出线方案(建议优先采用侧出线方案)。

Note: Switchgear width (1) suitable for cable side outgoing arrangement, Switchgear width (2) suitable for cable rear outgoing arrangement (Side outgoing arrangement is preferred)

一次回路方案图 Typical primary schemes

方案编号 No.	13	
一次方案 Primary circuit scheme		
柜宽(1) Panel width(1)	24E	32E
柜宽(2) Panel width(2)	24E 32E	
设备室高 Compartment height	72E	72E
最大工作电流(A) Max.operating current	2000	4000
主要设备 Main components	BH-0.66	BH-0.66
用途 Application	计量 Metering	

方案编号 No.	14	15	16	17	18	19	20	21	22
一次方案 Primary circuit scheme									
柜宽(1) Panel width(1)	32E	40E				40E			40E
柜宽(2) Panel width(2)	24E 32E	24E 32E				24E 32E			24E 32E
设备室高 Compartment height	72E	8E/4	8E/2	8E/4	8E/2	8E	16E	24E	8E/2
最大工作电流(A) Max.operating current	4000A	7.5	15	5	15	50	75	160	15
主要设备 Main components	BH-0.66	C65 B16-25 BH-0.66	C65 B37-45 BH-0.66	C65 B16 T16 BH-0.66	C65 B25-45 T25-45 BH-0.66	GEKM1-100 GEKM1-225 B45-105 T45-105 BH-0.66	GEKM1-225 B170-250 T170-250 BH-0.66	GEKM1-400 B250-370 T250-370 BH-0.66	C65 B16-45 BH-0.66
用途 Application	计量 Metering	不可逆 Irreversibly							不可逆 Irreversibly

注：柜宽(1)适用于电缆侧出线方案，柜宽(2)适用电缆后出线方案(建议优先采用侧出线方案)。

Note: Switchgear width (1) suitable for cable side outgoing arrangement, Switchgear width (2) suitable for cable rear outgoing arrangement (Side outgoing arrangement is preferred)

一次回路方案图 Typical primary schemes

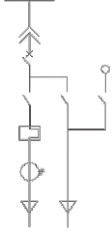
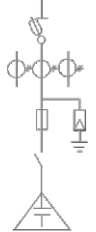
方案编号 No.	23	24	25	26	27	28	29	30	31
一次方案 Primary circuit scheme									
柜宽(1) Panel width(1)		40E			40E			40E	
柜宽(2) Panel width(2)		24E 32E			24E 32E			24E 32E	
设备室高 Compartment height	8E/2	8E	16E	24E	8E/2	8E/2	8E	16E	24E
最大工作电流(A) Max.operating current	15	30	65	100	7.5	7.5	15	65	100
主要设备 Main components	C65 B16~45 T16~TSA45 BH-0.66	GEKM1-100 B65~85 T105 BH-0.66	GEKM1-225 B105~170 T105~170 BH-0.66	GEKM1-400 B250 T250 BH-0.66	C65 B16~25 BH-0.66	C65 B16~25 T16~25 BH-0.66	GEKM1-100 B37~45 T105~170 BH-0.66	GEKM1-225 B65~170 T105~170 BH-0.66	GEKM1-400 B250 T250 BH-0.66
用途 Application	可逆 Reversible				Y/Δ				

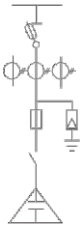

方案编号 No.	32	33	34	35	36	37	38	39
一次方案 Primary circuit scheme								
柜宽(1) Panel width(1)		40E				40E		
柜宽(2) Panel width(2)		24E 32E				24E 32E		
设备室高 Compartment height	8E/2	8E	16E	24E	8E/2	8E	16E	24E
最大工作电流(A) Max.operating current	15	65	100	165	15	65	100	160
主要设备 Main components	C65 B16~45 T16~45 BH-0.66	GEKM1-100 GEKM1-250 B45~105 T45~105 BH-0.66	GEKM1-250 B170~250 T170~250 BH-0.66	GEKM1-400 B250~370 T250~370 BH-0.66	C65 B16~45 T16~TSA45 BH-0.66	GEKM1-100 B65~85 T105 BH-0.66	GEKM1-225 B105~170 T105~170 BH-0.66	GEKM1-400 B250 T250 BH-0.66
用途 Application	不可逆 Irreversibly				可逆 Reversible			

注：柜宽(1)适用于电缆侧出线方案，柜宽(2)适用电缆后出线方案(建议优先采用侧出线方案)。

Note: Switchgear width (1) suitable for cable side outgoing arrangement, Switchgear width (2) suitable for cable rear outgoing arrangement (Side outgoing arrangement is preferred)

一次回路方案图 Typical primary schemes

方案编号 No.	40	41	42	43	44	45
一次方案 Primary circuit scheme						
柜宽(1) Panel width(1)	40E				24E	24E
柜宽(2) Panel width(2)	24E、32E					
设备室高 Compartment height	8E/2	8E/2	16E/2	32E/2	72E	72E
最大工作电流(A) Max.operating current	7.5	15	65	100	最大补偿容量(400kvar) Max.compensation capacity	
主要设备 Main components	C65 B16~25 T16~25 BH-0.66	GEKM1-100 B37~45 T105~170 BH-0.66	GEKM1-400 B65~170 T105~170 BH-0.66	GEKM1-400 B250 T250 BH-0.66	QSA-400 RT14 B BKMJ JKL5C	QSA-400 RT14 B BKMJ
用途 Application					自动控制正屏 Automatic control of the positive screen	自动控制辅屏 Automatic control of auxiliary screen

方案编号 No.	46	47	48	49
一次方案 Primary circuit scheme				
柜宽 Panel width	32E	32E	40E	40E
设备室高 Compartment height	72E	72E	72E	72E
最大工作电流(A) Max.operating current	120~180KVAR		200~300KVAR	
主要设备 Main components	QSA-400 RT14 B BKMJ JKL5C	QSA-400 RT14 B BKMJ	QSA-630 RT14 B BKMJ JKL5C	QSA-400 RT14 B BKMJ
用途 Application	自动控制正屏 Automatic control of the positive screen	自动控制辅屏 Automatic control of auxiliary screen	自动控制正屏 Automatic control of the positive screen	自动控制辅屏 Automatic control of auxiliary screen

注：柜宽(1)适用于电缆侧出线方案，柜宽(2)适用电缆后出线方案(建议优先采用侧出线方案)。

Note: Switchgear width (1) suitable for cable side outgoing arrangement, Switchgear width (2) suitable for cable rear outgoing arrangement (Side outgoing arrangement is preferred)