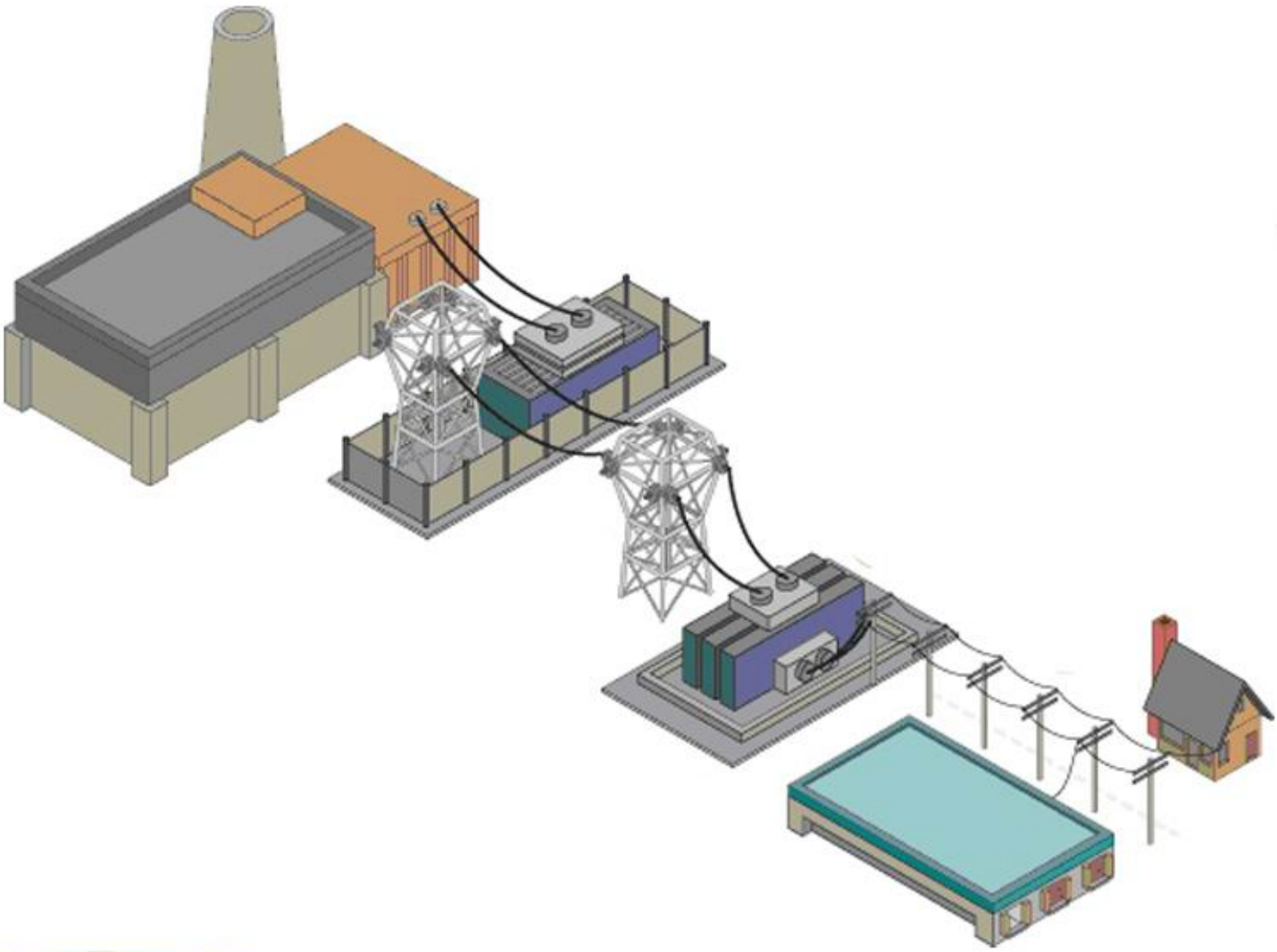
PRODUCT OVERVIEW

Energizing Your Life!



LIAONING MEC GROUP CO., LTD.

WE PROVIDE OPTIMUM SOLUTIONS TO THE CLIENTS FOR THEIR BEST BENEFITS.

Main Products

Power Transformer & Distribution Transformer



Electric Furnace Transformer & Package Substation



Switchgear & Ring Main Unit



Company Qualifications

Liaoning MEC Group Co., Ltd. is an integrated group company located in the coastal city of Dalian, China. The government owned company was established in 1978 and became a share holding company in 1994. Our group company engages in the business of industrial manufacturing, international trade, logistics, real estate and we also invest in various fields as shareholders of many corporations.

We have over 1,500 employees worldwide. Our average annual turnovers are more than RMB 2,200 millions and the annual volume of import and export amounts to more than USD 250 millions.

As one of the first class power equipment suppliers in China, our product line ranges from transformer, package substation, switchgear to insulator, power fitting and other substation & transmission line equipments. Our products have been supplied to many companies all over the world which enjoy high reputations from our customers with high quality and excellent service.

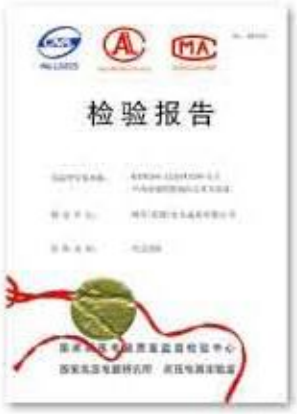
Company Qualifications

Testing Reports

MVNEX试验报告
Testing Report of MVNEX

KYN58-40.5kV试验报告
Testing Report of KYN40.5

MCSET试验报告
Testing Report of MCSET



KYN28A-12kV试验报告
Testing Report of KYN28A-12kV

XGN试验报告
Testing Report of XGN

NEX20试验报告
Testing Report of NEX20

XGREEN试验报告
Testing Report of XGREEN

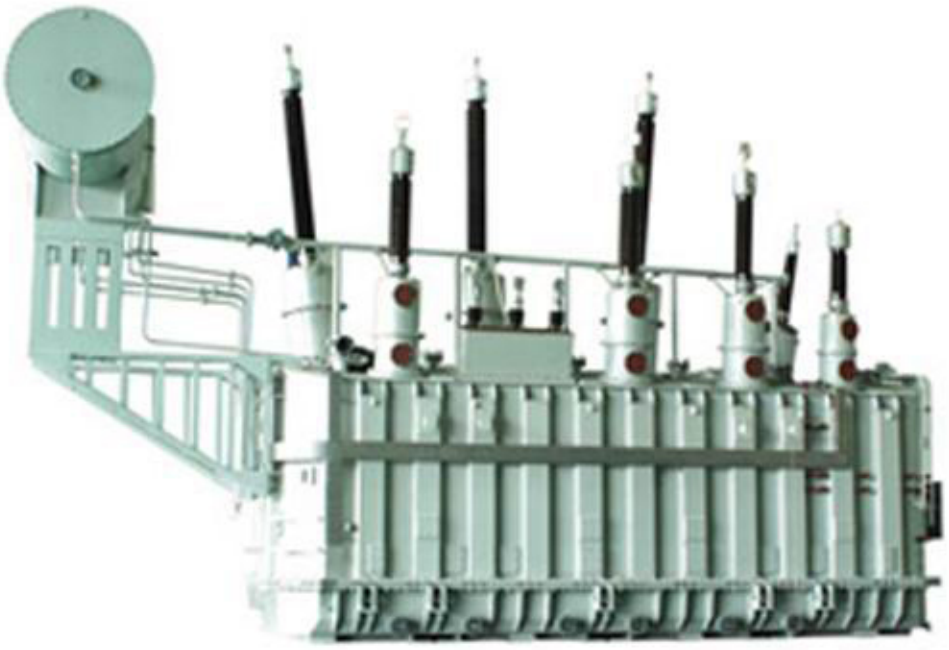
ZS11试验报告
Testing Report of ZS11

500KV TRANSFORMER

120MVA～334MVA SINGLE PHASE, THREE WINDING, ON-LOAD REGULATION POWER TRANSFORMER

Rated Capacity (MVA)	Rated Voltage			Connection Symbol	Loss (kW)		No-load Current (%)	Power Distribution (%)	Short-Circuit Impedance (%)
	HV (kV)	MV (kV)	LV (kV)		No-load	Load			
120	500/√3 525/√3 550/√3	230/√3 ±8 ×1.25%	15.75 35 36 38.5 63 66	Ia0i0	45	213	0.13	120/120/40	HV-MV 12 HV-LV 34～38 MV-LV 20～22
167					53	255	0.13	167/167/40	
								167/167/60	
250					74	360	0.10	250/250/40	
								250/250/80	
334					91	442	0.08	334/334/100	
120					45	226	0.13	120/120/40	HV-MV 12 HV-LV 42～46 MV-LV 28～30
167					53	272	0.13	167/167/60	
250					74	366	0.10	250/250/60	
								250/250/80	
334					91	459	0.08	334/334/80	
								334/334/100	
120					45	226	0.13	120/120/40	HV-MV 14～15 HV-LV 42～46 MV-LV 28～30
167					53	272	0.13	167/167/60	
250					74	366	0.10	250/250/80	
334					91	459	0.08	334/334/80	
								334/334/100	

220KV TRANSFORMER



31500KVA～240000KVA THREE PHASE, THREE WINDING, ON-LOAD REGULATION POWER TRANSFORMER

Rated Capacity (kVA)	Rated Voltage			Connection Symbol	Loss (kW)		No-load Current (%)	Power Distribution (%)	Short-Circuit Impedance (%)
	HV (kV)	MV (kV)	LV (kV)		No-load	Load			
31500	220±8 ×1.25%	69 115 121	6.3	YNyn0 d11	35	154	0.77	100/100/100 100/50/100 100/100/50	HV-MV 12～14 HV-LV 22～24 MV-LV 7～9
40000			6.6		42	180	0.70		
50000			10.5		48	214	0.63		
63000			11 35 37 38.5		56	248	0.63		
90000			10.5		74	333	0.56		
120000			11		92	410	0.56		
150000			35		108	487	0.49		
180000			37		125	599	0.49		
240000			38.5		154	741	0.45		

110KV TRANSFORMER

6300KVA~63000KVA THREE PHASE, THREE WINDING, ON-LOAD REGULATION POWER TRANSFORMER

Rated Capacity (kVA)	Rated Voltage			Connection Symbol	Loss (kW)		No-load Current (%)	Short-Circuit Impedance (%)
	HV (kV)	MV (kV)	LV (kV)		No-load	Load		
6300	110±8 ×1.25%	35 37 38.5	6.3 6.6 10.5 11	YNyn0 d11	9.6	44.7	0.95	HV-MV 10.5 HV-LV 17~18 MV-LV 6.5
8000					11.5	53.2	0.95	
10000					13.7	62.7	0.89	
12500					16.2	74.1	0.89	
16000					19.4	90.3	0.84	
20000					22.9	106.4	0.84	
25000					27	126.4	0.78	
31500					32.2	149.2	0.78	
40000					38.6	179.6	0.73	
50000					45.5	213.8	0.73	
63000					54.2	256.5	0.67	

33/35KV TRANSFORMER

35KV POWER TRANSFORMER

Rated Capacity (kVA)	Rated Voltage		Connection Symbol	Short-Circuit Impedance (%)	Losses (kW)		No-load current (%)
	HV (kV)	LV (kV)			No-load (kW)	Load (kW)	
800	35±5% 38.5± 5%	3.15 6.3 10.5	Yd11	6.5	0.98	9.41	1.0
1000					1.15	11.54	1.0
1250					1.41	13.94	0.9
1600					1.7	16.67	0.8
2000					2.18	18.38	0.7
2500					2.56	19.67	0.6
3150				7.0	3.04	23.09	0.56
4000					3.62	27.36	0.56
5000					4.32	31.38	0.48
6300				7.5	5.25	35.06	0.48
8000	35±2* 2.5% 38.5 ±2 *2.5%	3.15 3.3 6.3 6.6 10.5 11	YNd11		7.2	38.48	0.42
10000					8.7	45.32	0.42
12500				8	10.08	53.87	0.4
16000					12.16	65.84	0.4
20000					14.4	79.52	0.4
25000					17.02	94.05	0.32
31500					20.22	112.86	0.32

DISTRIBUTION TRANSFORMER

11KV DISTRIBUTION TRANSFORMER

Rated capacity (kVA)	Rated voltage			Connection symbol	No-load loss (W)	Load loss (W)	No-load current (%)	Short-Circuit Impedance (%)
	H.V (kV)	MH (kV)	LV (kV)					
30	6 6.3 10 10.5 11	±5% or ±2×2.5%	0.4	Yyn0 or Dyn11	100	630/600	2.3	4.0
50					130	910/870	2	
63					150	1090/1040	1.9	
80					180	1310/1250	1.9	
100					200	1580/1500	1.8	
125					240	1890/1800	1.7	
160					280	2310/2200	1.6	
200					340	2730/2600	1.5	
250					400	3200/3050	1.4	
315					480	3830/3650	1.4	
400					570	4520/4300	1.3	
500					680	5410/5150	1.2	
630					810	6200	1.1	4.5
800					980	7500	1.0	
1000					1150	10300	1.0	
1250					1360	12000	0.9	
1600					1640	14500	0.8	

DRY TYPE TRANSFORMER

10KV THREE PHASE CAST RESIN DRY-TYPE TRANSFORMER

Rated Capacity (kVA)	No-load Loss (W)	Load Loss (W)			Short-circuit Impedance (%)	No-load Current (%)
		100℃	120℃	145℃		
30	198	675	713	760	4	2.6
50	279	941	1007	1359		2.4
80	378	1302	1387	1482		2
100	405	1492	1492	1691		2
125	477	1748	1862	1995		1.6
160	549	2014	2138	2290		1.6
200	630	2385	2546	2727		1.6
250	729	2613	2774	2964		1.6
315	810	3287	3487	3734		1.4
400	990	3772	4009	4294		1.4
500	1179	4617	4912	5254		1.4
630	1359	5558	5909	6327		1.4
630	1314	5643	5995	6413	6	1.2
800	1539	6584	6992	7486		1.2
1000	1791	7695	8180	8750		1
1250	2115	9149	9747	10431		1
1600	2475	11115	11780	12607		1
2000	3060	13680	14535	1552		0.8
2500	3600	16245	17271	18487		0.8
1600	2484	12350	13015	13927	8	1
2000	3060	15105	16055	17100		0.8
2500	3600	17860	19000	20330		0.8

ELECTRIC FURNACE TRANSFORMER

ON-LOAD REGULATION ARC FURNACE TRANSFORMER

Rated Capacity (kVA)	Primary Voltage (kV)	Secondary Voltage (V)		Secondary Step Voltage (V)	Rated Secondary Current (A)	Regulation Voltage Step	Connection symbol	Short-Circuit Impedance (%)	Cooling Method
		Invariablenes Power	Invariablenes Current						
10000	35 66	280-240	240-100	10	24056	19 (5 Steps Invariablenes Power 14 Steps Invariablenes Current)	Dd0 Yd11 Ynd11	7-8	OFWF or OFAF
12500		314-270	270-116	11	26729				
16000		353-305	305-137	12	30287				
20000	35 66 110	392-340	340-158	13	33962			6-7 (35kV) 7.5-8.5 (66、110kV)	
25000		436-380	380-184	14	37984				
31500		489-425	425-201	16	42792				
40000		547-475	475-223	18	48619				
50000		610-530	530-250	20	54467				
63000		673-585	580-277	22	62176				
80000		760-660	660-310	25	69982				

PACKAGE SUBSTATION

	Description	unit	Specification		
HV unit	Rated frequency	HZ	50 or 60		
	Rated voltage	KV	6	10	35
	Maximum working voltage	KV	6.9	11.5	40.5
	Power frequency withstand voltage to ground and between phases / Isolation cut	KV	32/36	42/48	95/118
	Lightning impulse voltage phase to ground and between phases / Isolation cut	KV	60/70	75/85	185/215
	Rated current	A	315；400；630		
	Rated short-term withstand current	kA	12.5 (2s) 16(2s) 20(2s)		
	Rated peak withstand current	kA	31.5 40 50		
LV Unit	Rated Voltage	V	380 220		
	Main loop rated current	A	100～3200		
	Rated short-time current tolerance	kA	15 30 50		
	Rated peak current tolerance	kA	30 63 110		
	Branch current	A	10～800		
	Branch circuit number		1～6		
	Compensation capacity	Kvar	0～360 measured by capacity 15%～20% compensation		

NEX40

Metal-clad withdrawable switchgear

Introduction

NEX40 metal-clad withdrawable switchgear is authorized to be manufactured by our factory with full support from Schenider Electric. NEX40 is medium voltage switchgear and has reached international advanced level. It is conformity with the standard of GB/IEC. NEX40 is present for substations, power stations, cement plants and industrial and mining enterprises where the rated voltage is up to 40.5kV.

Features

- SF6 circuit breaker is used to protect reburning and over-voltage phenomena.
- Unique propelling truck can be easily moved. Simple and reliable interlocking device which can be simply installed
- Movable trolley assures the precision of breaker's structure and guarantees the interchange between breakers and switchgear.
- Simplified and friendly Human-Machine Interface makes the operation safely and easily.
- Comprehensive design concept can optimize the electric field.

Name	Units	Data
Rated voltage	kV	40.5
Rated current	A	630/1250/2000
Rated frequency	Hz	50
Rated short circuit breaking current	kA	25/31.5
Rated short circuit closing current	kA	63/80
1 minute power frequency withstand voltage	kV	95
Impulse withstand voltage	kV	185

KYN28A

Metal-clad withdrawable switchgear

Introduction

KYN28A/GZS1 metal-clad withdrawable switchgear is suitable for 3-phase AC50Hz, up to 12KV single busbar and single busbar section system. Mainly applied for power distribution, system control, protection and monitoring.

Features

- Interlocking system
- Flexible solutions
- High level of compatibility

Name	Units	Data
Rated voltage	kV	12
Rated current	A	630/1250/2500/3150/4000
Rated frequency	Hz	50
Rated short circuit breaking current	kA	25/31.5/40
Rated short-circuit closing current	kA	63/80/100
1 minute power frequency withstand voltage	kV	42
Impulse withstand voltage	kV	75

MVnex

Metal-clad withdrawable switchgear

Introduction

MVNEX metal-clad withdrawable switchgear is authorized to be manufactured by our factory with full support from Schneider Electric. MVNEX is medium voltage switchgear and has reached international advanced level. It is conformity with the standard of GB/IEC. MVNEX is present for substations, power stations, industrial and mining enterprises and cement plants where the rated voltage is up to 12kV.

Features

- Evoils vacuum circuit breaker with arc extinguishing compartment is used.
- Unique propelling truck can be easily moved. Simple and reliable interlocking device which can be simply installed
- Movable trolley assures the precision of breaker's structure and guarantees the interchange
- between breaker and switch.
- Simplified and friendly Human-Machine Interface makes the operation safely and easily.
- Comprehensive design concept can optimize the electric field.

  Design to protect internal arc.

Name	Units	Data
Rated voltage	kV	12
Rated current	A	630/1250/2500/3150
Rated frequency	Hz	50
Rated short circuit breaking current	kA	25/31.5/40
Rated short circuit closing current	kA	63/80/100
1 minute power frequency withstand voltage	kV	42
Impulse withstand voltage	kV	75

UG550

Metal-clad withdrawable switchgear

Introduction

UG550 medium voltage, air-insulted, metal-clad withdrawable switchgear is available up to a maximum panel current of 1250A. It has gone all the test required by International Standards (IEC) and China standards（GB）small but compact, incentive to the environment, fail-safe interlocking system. Anti-arc design.

Features

- Compact design with 550mm in width
- Supplied with the requirements of environment protection
- Fail-safe interlock device
- Comprehensive design concept can optimize the electric field.
- Design to protect internal arc.

Name	Units	Data
Rated voltage	kV	12
Rated current	A	630/1250/2000/2500/3150/4000
Rated frequency	Hz	50
Rated short circuit breaking current	kA	25/31.5/40
Rated short circuit closing current	kA	63/80/100
1 minute power frequency withstand voltage	kV	42
Impulse withstand voltage	kV	75

Okken

Low voltage switchgear

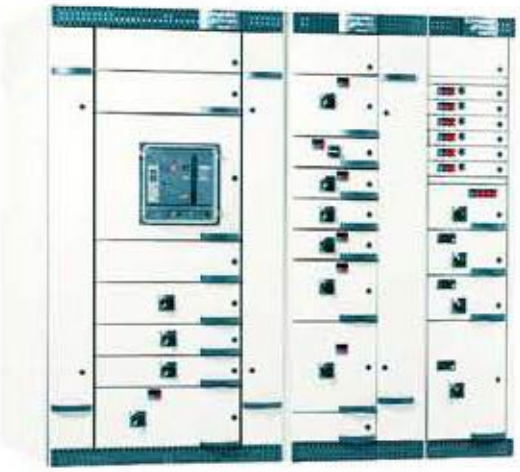
Introduction

Okken switchgear is authorized to be manufactured by our factory with full support from Schneider Electric which is low voltage switchgear and has reached international advanced level. Okken is conformity with the standard of GB/IEC. It can be used in large industrial sites, critical process sites, large infrastructure and tertiary sites, nuclear, data center, marine application.

Name	Units	Data
Rated voltage	V	690
Rated insulation voltage	V	1000
Rated frequency	Hz	50
Horizontal busbar rated current	A	6300
Vertical busbar rated current	A	4000/2100/1500
Horizontal busbar short-time current	kA/s	150
Horizontal busbar peak withstand current	kA	330
Vertical busbar rated short-time current	kA/s	100
Vertical busbar peak withstand current	kA	220
Rated impulse voltage	kV	12
Over voltage category		IV
Degree of pollution		3
Degree of protection		IP31/41/54
Height	mm	2200/2350
Width	mm	650/900/1000/1300
Depth	mm	600/1000/1200

Blokset

Low voltage switchgear



Introduction

Blokset switchgear is authorized to be manufactured by our factory with full support from Schneider Electric. Blokset is low voltage switchgear and has reached international advanced level. It is conformity with the standard of GB/IEC. Blokset is present for medium and large industrial sites: mining, manufacturing industry, large commercial building areas and infrastructures where the rated voltage is up to 690V.

Name	Units	Data
Rated voltage	V	400/690
Rated insulation voltage	V	1000
Rated frequency	Hz	50
Horizontal busbar rated current	A	6300
Vertical busbar rated current	A	4000/2100/1500
Horizontal busbar rated short-time current	kA/s	100
Horizontal busbar peak withstand current	kA	220
Vertical busbar rated short-time current	kA/s	85
Vertical busbar peak withstand current	kA	187
Rated impulse voltage	kV	12
Overvoltage category		IV
Degree of pollution		3
Degree of protection		IP31/42/54
Height	mm	2200
Width	mm	700/900/1100
Depth	mm	600/1000

PRISMA

Low voltage switchgear

Introduction

Prisma is authorized to be manufactured by our factory with full support from Schenider Electric. Prisma is low voltage switchgear and has reached international advanced level. It is conformity with the standard of GB/IEC. It is present for low voltage distribution and control switchboards for tertiary and industrial buildings where the rated voltage is up to 690V.

Features

- Modular design, Interchangeable functional units
- Simplified maintenance and installation, possibility of upgrading
- Incorporated in all environments, high safety and reliability
- Type-tested assemblies of switchgear
- Unique design

Name	Units	Data
Rated voltage	V	400/690
Rated insulation voltage	V	1000
Rated frequency	Hz	50
Busbar rated current	A	4000
Busbar short-time withstand current	kA/s	85
Busbar rated peak withstand current	kA	187
Rated impulse voltage	kV	12
Overvoltage category		IV
Degree of pollution		3
Degree of protection		IP31/54
Height	mm	2025
Width	mm	700/900/1100
Depth	mm	400/600/1000

MCS

Low voltage switchgear

Introduction

MCS low voltage withdrawable switchgear is composed of power distribution center and motor control center, which is applied for 50Hz, rated working voltage up to 690V. It is largely used in power stations, substations, mine enterprises, and industrial buildings. It meets with the standard of GB7251/IEC60439.

Name	Units	Data
Rated voltage	V	400/690
Rated insulation voltage	V	1000
Rated frequency	Hz	50
Horizontal busbar rated current	A	5500
Vertical busbar rated current	A	2000
Horizontal busbar rated short-time current	kA/s	100
Horizontal busbar rated peak withstand current	kA	220
Vertical busbar rated short-time current	kA/s	85
Vertical busbar rated peak withstand current	kA	187
Rated impulse voltage	kV	12
Overvoltage category		IV
Degree of pollution		3
Degree of protection		IP31/42/54
Height	mm	2200
Width	mm	600/800/1000/1200
Depth	mm	600/1000/1200

MNS 2.0

Low voltage switchgear

Introduction

MNS2.0 is low voltage switchgear authorized and supported by ABB to be manufactured by our factory. MNS2.0 is proven in terms of quality, performance and safety and has reached the international level. It is widely applied to industrial market, commercial market and residential market.

Name	Units	Data
Rated voltage	V	400/690
Rated insulation voltage	V	1000
Rated frequency	Hz	50
Horizontal busbar rated current	A	6300
Vertical busbar rated current	A	2000
Horizontal busbar rated short-time current	kA/s	100
Horizontal busbar rated peak withstand current	kA	220
Vertical busbar rated short-time current	kA/s	85
Vertical busbar rated peak withstand current	kA	187
Rated impulse voltage	kV	12
Overvoltage category		IV
Degree of pollution		3
Degree of protection		IP31/42/54
Height	mm	2200
Width	mm	600/800/1000/1200
Depth	mm	600/1000/1200

XGreen

Solid-insulated ring main unit

Introduction

XGreen is a new generation of environment-friendly product. The product is famous for its high-level of safety operation and applied for the 12kV power system. With compact design and sealed metal enclosure which can avoid the impact on environment. All primary parts installed in the sealed cabinet. No SF6, vacuum breaking and solid-insulated technology, integrated computer control protection.

Specification	Unit	Parameter		
Rated voltage	kV	12	17.5	24
Rated busbar voltage	A	630	630	630
Impulse withstand voltage	kV	75	95	125
Frequency withstand voltage	kV	42	38	50
Rated short-time withstand current	kA/s	20/2	16/1	16/1
Rated peak withstand current	kA	50	40	40
Internal arc withstand current	kA/s	20/1	16/1	16/1
Circuit breaker				
Rated current	A	200(630)	200	200
Rated short-circuit breaking current	kA	20	16	16
Rated short-circuit making current	kA	50	40	40
Rated short-circuit withstand current	kA/s	20/2(20/4)	16/1	16/1
Load circuit breaker				
Rated current	A	630	630	630
Rated load current factor is 0.7	A	630	630	630
Rated short-circuit making current	kA	50	40	40
Rated short-circuit withstand current	kA/s	20/2	16/1	16/1

SM6

Air-insulated ring main unit

Introduction

SM6 is an air-insulated ring main unit which is compliance with the standard of GB/IEC. SM6 units are widely used for the MV secondary distribution in MV/LV transformer substations in public distribution systems and MV consumer of distribution substations up to 24kV.

Features

- Compact design, easy installation, less maintenance, high reliability
- Flexible extensibility, high safety, rich of operational experience
- Three position switch for natural interlocking, fail-safe interlock facility

Name	Units	Data	
Rated voltage	kV	12	24
Rated current	A	630	
Rated frequency	Hz	50	
Rated short circuit breaking current	kA	20/25	20
Rated short circuit closing current	kA	50/63	50
1 minute power frequency withstand voltage	kV	42	65
Impulse withstand voltage	kV	75	125
Rated breaking current of no-load transformer	A	16	
Rated breaking current of no-load cable	A	25	
Thermal stability current	kA/s	20/4 or 25/1	20/4
Transfer current	A	1750	1400
Internal arc	kA/s	16/1 or 20/1	

RM6

Gas-insulated ring main unit

Introduction

RM6 is gas-insulated ring main unit of very compact design. RM6 is compliance with the standard of GB/IEC. It is suitable for all utility or industrial distribution networks up to 24 kV.

Features

- Easy for installation, less maintenance, high reliability, flexible extensibility, high safety, highly compact configuration
- Rich of operational experience
- With IP67 degree of protection, full insulation and sealed
- Three position switch result to natural interlock, Fail-safe interlock device
- Incorporated in all environments

Name	Units	Data	
Rated voltage	kV	12	24
Rated current	A	630	
Rated frequency	Hz	50	
Rated short circuit breaking current	kA	20/25	20
Rated short circuit closing current	kA	50/63	50
1 minute power frequency withstand voltage	kV	42	65
Impulse withstand voltage	kV	75	125
Rated breaking current of no-load transformer	A	16	
Rated breaking current of no-load cable	A	25	
Thermal stability current	kA/s	20/4 or 25/1	20/4
Transfer current	A	1750	1400
Internal arc	kA/s	16/1 or 20/1	

BIOSCO

Prefabricated substation

Introduction

Biosco prefabricated substation is designed for MV/LV substations for public and commercial distribution and industrial buildings up to 12KV.

Features

- Safety and operating dependability
- Unique temperature rise process, optimal ventilation structure
- Elegant appearance, ability of anti-corrosion
- Easy of operation and installation, modular multi-functional design

Name		Units	Data
Cubicle	Degree of temperature rise	grade	10
	Degree of noise	dB	44
Medium-voltage Unit	Rated frequency	HZ	50
	Rated voltage	kV	12
	Rated power frequency withstand voltage, phase to earth, phase-to-phase, isolated fracture	kV	42/48
	Rated impulse withstand voltage, phase to earth, phase-to-phase, isolated fracture	kV	95/110
	Rated Voltage	A	630
	Rated short-time current	kA	20/3or25/1 sec
	Rated peak withstand current	kA	50 or 63
	Degree of protection	IP33D	
Low-voltage Unit	Rated Voltage	V	400
	Main circuit rated current	A	100~1600
	Rated thermal stability current	kA	30/1sec
	Rated dynamic current	kA	63
	Degree of protection	IP33D /IP34D	
	Compensation capability	kvar	0~300
Transformer Unit	Rated capability	kVA	160~1000
	Degree of protection	IP23D	

www.mec-power.com

Liaoning MEC Group Co., Ltd

28F, World Trade Center, No.25, Tongxing Street, Dalian, China

TEL: +86-411-39803851/3853/3858/3831/3835

FAX: +86-411-39803309

Email: power@mec.com.cn