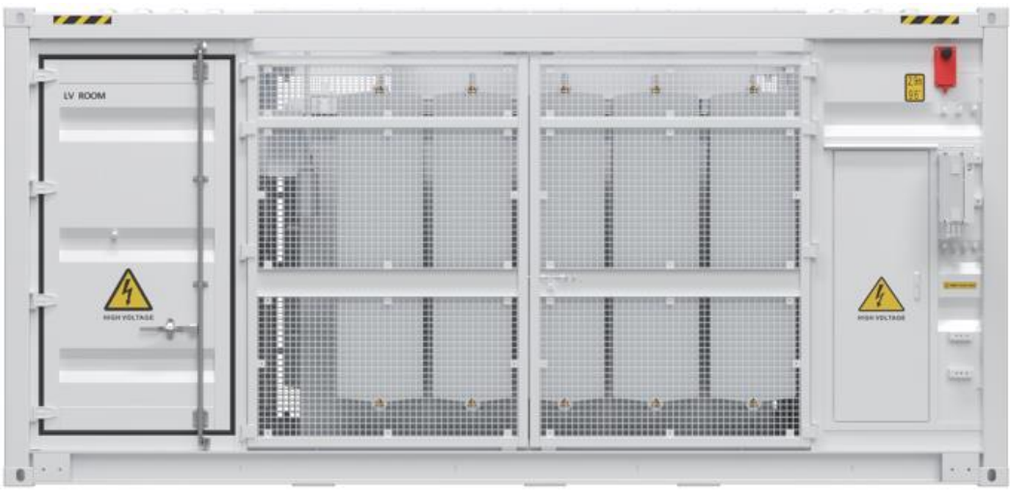
JUPT-11000K/7000K/3000K-HD1

Smart Transformer Station



LV Arc Protection

MV Upward
Arcing Release Protection

MV Terminal
Temperature Detection

MV Metering①

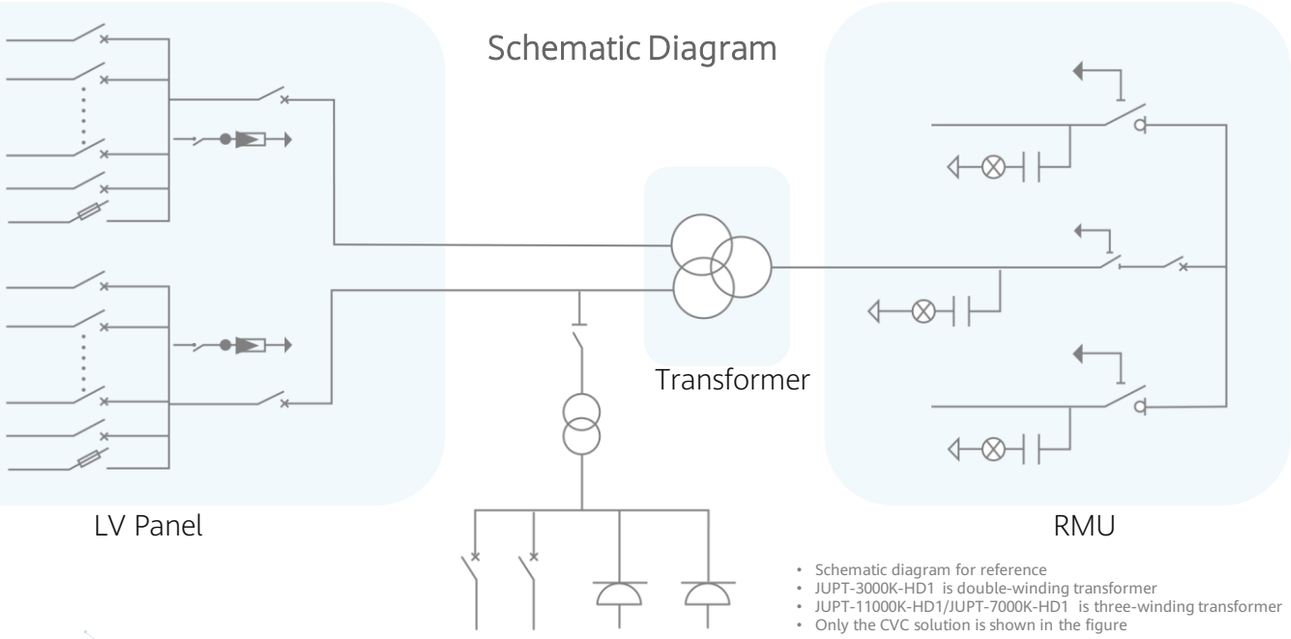
Smart Closed-loop Control

Class AA
Energy Efficiency

SF6 Free②

Natural Ester Oil Design③

Schematic Diagram



- Schematic diagram for reference
- JUPT-3000K-HD1 is double-winding transformer
- JUPT-11000K-HD1/JUPT-7000K-HD1 is three-winding transformer
- Only the CVC solution is shown in the figure

1. Only support 33kV and 13.8kV, and SF6 Free Transformer don't support
2. Support ≤ 24KV only
3. Support 3MW, 7MW STS only

Technical Specifications

Technical Specifications	JUPT-11000K-HD1	JUPT-7000K-HD1	JUPT-3000K-HD1
Input			
Available Inverters / PCS	SUN2000-506KTL-H1/H2/H3		
Max. MCCB inputs	24	16	8
Max. LV AC Inputs	24	16	8
AC Power	12,144 kVA @30℃[4] 11,040 kVA @40℃	8,096 kVA @30℃ 7,360 kVA @40℃	4,048 kVA @30℃ 3,680 kVA @40℃
Rated Input Voltage	1000 V		
LV Panel Segregation	Form 2b		
LV Main Switches	ACB (4,000 A, 2 x 1 pcs)	ACB (2,900 A, 2 x 1 pcs)	ACB (2,900 A, 1 x 1 pcs)
LV Main Switches	MCCB (400 A, 2 x 12 pcs)	MCCB (400 A, 2 x 8 pcs)	MCCB (400 A, 8 pcs)
Output			
Rated Output Voltage Range	10~35 kV[5]		
Frequency	50 Hz or 60 Hz		
Transformer Type	Oil-immersed, Conservator Type		
Transformer Cooling Type	Mineral Oil: ONAF/ONAN	Mineral Oil: ONAN Natural Ester: KNAN	
Transformer Tappings	± 2 x 2.5%		
Transformer Oil Type	Mineral Oil (PCB Free)	Mineral Oil (PCB Free)/Natural ester oil (Optional)	
Transformer Vector Group	Dy11-y11		Dy11
Efficiency Index	Tier 2 In Accordance with EN 50708 / Full Load Efficiency Index ≥99%		
RMU Type	SF6 Gas Insulated/Natural Gas Insulated[6]		
RMU Transformer Protection Unit	MV Vacuum Circuit Breaker Unit		
RMU Cable Incoming / Outgoing Unit	Direct Cable Unit or Cable Load Break Switch Unit		
Auxiliary Transformer	Dry Type Transformer, 8kVA, Single-phase, li0/50kVA, Three-phase, Dyn11 (Optional)	Dry Type Transformer, 5kVA, Single-phase, li0/50kVA, Three-phase, Dyn11 (Optional)	
Output Voltage of Auxiliary Transformer	Single-phase 230V / 127V , Three-phase 400V or 220V		
Protection			
Transformer Detection & Protection	Oil Level, Oil Temperature, Oil Pressure and Buchholz		
Protection Degree of MV & LV Room	IP 54		
Internal Arcing Fault of STS	Standard IAC A 20 kA 1s/ IAC A 25 kA 1s		
MV Arc Releasing Protection	MV Upward Arc Releasing for Higher Safety, Meets IEC 62271-202 IAC-A		
LV Arc Protection	Meets IEC 61641 up to Class C arcing protection on LV side, Except for high altitudes		
MV Relay Protection	Standard configuration 50/51, 50N/51N, Inrush Blocking, FR,49T(External trip), 50G/51G(Optional) High configuration 50/51, 50N/51N,74, 86, 27, 59, 79, 59N, 50BF, Inrush Blocking, Watchdog, 49T(External Trip), FR, 50G/51G(Optional),87(Optional)		
LV Overvoltage Protection	Type I+II		
Anti-corrosion Protection	C5-M/C5-H[7] (Optional)		
Feature			
2 kVA UPS	Optional[8]		
MV Surge Arrester for Transformer	Optional[8]		
IMD license	Optional[8]		
General			
Dimensions (W x H x D)	6,058 x 2,896 x 2,438 mm (20' HC ISO Container)		
Weight	< 28 t	< 24 t	< 18 t
Operating Temperature Range	-25℃ ~ 60℃[9]		
Relative Humidity	0% ~ 95% (Non-condensing)		
Max. Operating Altitude	1000 m/4,000 m (Option)		
MV-LV AC Connections	Prewired and Pretested, No Internal Cabling Onsite		
LV Room Cooling	Smart Cooling without Air-across for Higher Availability		
Communication	Modbus TCP, Preconfigured with SmartLogger		
Standards Compliance			
IEC 62271-202, EN 50708, IEC 60076, IEC 62271-200, IEC 61439-1			

4. More detailed AC power of STS, please refer to the de-rating curve.
5. Rated output voltage from 10 kV to 35 kV, more available upon request.
6. Natural Gas Insulated, up to 24 kV, the switchgear contains the insulating gas Clean Air 0543. Clean Air is a natural gas (Natural-Origin-Gas) according to IEC 62271-4.
7. C5-H is only used in coastal areas with high corrosion.
8. Extra expense needed for optional features which standard product doesn't contain, more options upon request.
9. When ambient temperature ≥55℃, awning shall be equipped for STS on site by customer.