

RAPIER AX SOLID BLADE AIR BREAK SWITCH DISCONNECTOR



Air Break Switch Disconnecter Up to 36KV

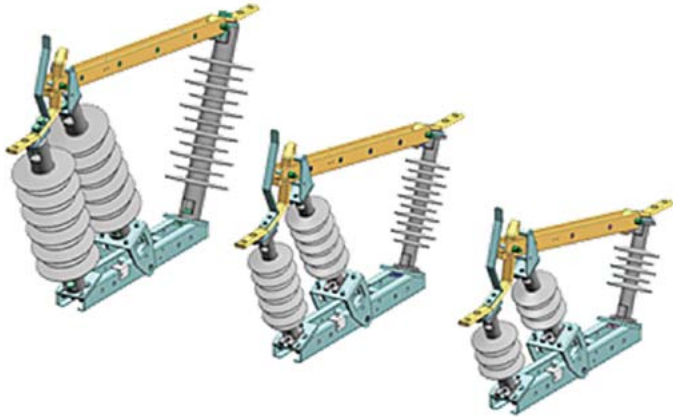
HIGH VOLTAGE EQUIPMENT

A division of ACTOM (Pty) Ltd



ACTOM

RAPIER AX SOLID BLADE AIR BREAK SWITCH DISCONNECTOR



The tin plated multiple copper laminate strips have been replaced with 2 plated copper bars which form the main current path and also the moving female contact.

The complete assembly normally comprises of 3 single phase units joined together with a common operating mechanism ensuring that all phases open and close at the same time.

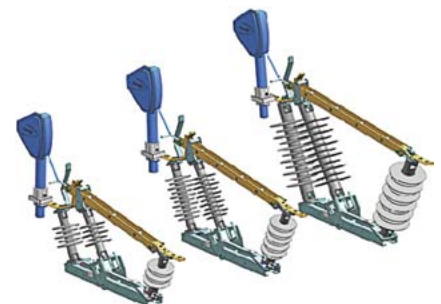
With regard to the mounting base, it is common across all three voltage ranges—12/15.5, 24 and 36kV making design of mounting simpler.

FEATURES

- Designed and manufactured to meet or exceed the requirements of IEC 62271
- Accommodates customer specific requirements where they may differ from IEC
- Silicone insulators with minimum creepage of 25mm/kV
- Plated HDHC copper work for longevity
- Available in the following voltage ranges- 12/15.5kV, 24kV and 36kV
- Standard current ratings of 630A and 800A
- Common operating mechanism
- Short time withstand current of 25kA rms for 3 seconds with 62.5kA peak
- Standard fault make capacity of 3kA rms with 7.5kA peak
- Compact and robust construction
- Suitable for horizontal and vertical mounting
- Suitable for mounting pole top (above the line) or underslung (below the line)
- Can be fitted with Motor drive / RTU for remote operation
- Earth blades rated at 25kA 3 sec for fitting to either side
- Self-latching shoot bolt on hook stick mechanism can be fitted with Safety Lock Flap for lock off and Point of isolation.

ACCESSORIES

- Low level operating handle, high level hook stick mechanism or Independent Manual spring (IMS) operating system
- 10kA rms 25kA peak fault make capacity when combined with IMS mechanism
- Load Break devices with breaking capacity of 630A for on-load use



SUMMARY OF TECHNICAL DATA

Product Range			
Rated Voltage kV	15.5	24	36
Nominal Voltage kV	12	22	33
Rated Current (A) Ir	630		
Rated STC (kA/s) Tk	32.75/ 25	25	25
Rated Peak Current (kA) Ip	62.5 / 300ms		
Basic Insulation Level BIL Up	100-125	150-165	200-220
Power Frequency Withstand (kV)pk	50-55	70-77	95-105
Breaking Capacity - Transformer Off load (A)	Not Required as per IEC 60265		
Breaking Capacity - Line Charging (A)	5	5	5
Creepage (mm/kV)	20 -31		
Insulation Material	Silicon Rubber		
Mechanical Class	M1		
Frequency	50 Hz		
Optional			
Motor Mechanism or RTU	*	*	*
Earth Switch	*	*	*
LBH Load break Heads 630 A	*	*	*
Environmental			
Ambient Temperature	-20°C + 50°C		
Humidity	0 -100%		
Altitude	Up to 1000mm		
Standards			
IEC	IEC 62271-1		
	IEC 62271-102		
	IEC 62271-103		
	IEC 60265		

BENEFITS

- Compact design, with minimal loose parts, easily lifted
- Simple erection and installation
- Flexible mounting arrangements, can be mounted on wood/concrete or steel structures
- Faster lead times and easier materials management

QUALITY

Manufactured to Iso 9001/2015 quality system environment, each unit is carefully assembled and tested prior to shipment, and information relating to production dates and individual serial number are provided with each unit

SERVICE

With extensive in-house design and after service experience offering complete design packages that identifies correct disconnectors, connectors and insulators for your specific requirements. This provides an end to end service giving you confidence and complete peace of mind.



Single Pole Mounted unit



DATA SHEET AX 15.5 kV

					Unit		Test House Standard	
1	Rated Voltage			U_r	kV	15.5		
2	Power Frequency Withstand Voltage rms							
3		Common	Dry	$U_d(2)$	kV	50	ASTA 2616	
4			Wet	$U_d(2a)$	kV	45		
5		Isolating Distance	Dry	$U_d(3)$	kV	55		
6			Wet	$U_d(3a)$	kV	50		
7	Lightning Impulse Withstand Voltage peak							
8		Common		$U_p(4)$	kV	110		IEC 62271
9		Isolating Distance		$U_p(5)$	kV	125		
10	Frequency			f_r	Hz	50		
11	Normal Current			I_r	A	630		
12	STC Withstand rms			I_k	kA	25	KEMA 2219-16	
13	STC Withstand Peak			I_p	kA	62.5		
14	Duration of STC			t_k	sec	3	IEC 62271	
15	Making Current rms/peak				kA	3/7.5	IEC 62271	
16	Making Current rms/peak optional				kA	10/25	IPH 6999-17-517	
						13.1/ 32.75	IEC 72271	
17	Breaking Current					Load-break Not Fitted Load-break Fitted	KEMA 2219-16	
18		Mainly Active Load		I_1	A	20	IPH 6244-17-324	
19		Closed Loop		I_2	A	300		
20		Transformer No Load		I_3 Test not required as IEC60265 - 6.101.8.3				
21		Cable Charging			I_{4a}	A	5	IEC 62271
22		Line Charging			I_{4b}	A	1	
23								
24								
25	Temperature Rise					Compliant with Table 3	ASTA 2616	
26	Radio Interference Voltage			RIV	$\mu\text{V/dB}$	32 / 30		
27	Resistance Measurement					<20% +	IEC 62271	
28	Insulator Type					Silicone with Alt. Sheds		
29	Minimum Creepage					25mm/kV minimum		
30	Insulator Colour					Grey		
31	No. of Insulators per phase					3		
32	Current Carrying Component Material					Electrolytic Tinned HDHC Copper	BSEN 13601	
33	Cable Connection Type					14mm Hole + Slot		
34	Mild Steel Metalwork					Hot Dip Galvanised	ISO 1461	
35	Type of disconnector					Rocking	ASTA 2599B	
36	Mechanical Endurance					2,000 operations M1	IEC 62271	

DATA SHEET AX 24 kV

					Unit		Test House Standard	
1	Rated Voltage			U_r	kV	24		
2	Power Frequency Withstand Voltage rms							
3	Common		Dry	$U_d(2)$	kV	70	ASTA 2620	
4			Wet	$U_d(2a)$	kV	60		
5	Isolating Distance		Dry	$U_d(3)$	kV	77		
6			Wet	$U_d(3a)$	kV	66		
7	Lightning Impulse Withstand Voltage peak							
8		Common		$U_p(4)$	kV	150		IEC 62271
9		Isolating Distance		$U_p(5)$	kV	165		
10	Frequency			f_r	Hz	50		
11	Normal Current			I_r	A	630		
12	STC Withstand rms			I_k	kA	25	KEMA 2256-17	
13	STC Withstand Peak			I_p	kA	62.5		
14	Duration of STC			t_k	sec	3		
15	Making Current rms/peak				kA	3/7.5		
16	Making Current rms/peak optional				kA	10/25		
						13.1/ 32.75	IEC 62271	
17	Breaking Current					Load-break Not Fitted	Load-break Fitted	KEMA 2256-17
18		Mainly Active Load		I_1	A	10	630	
19		Closed Loop		I_2	A	300	630	
20		Transformer No Load		I_3 Test not required as IEC60265 - 6.101.8.3				
21		Cable Charging		I_{4a}	A	5	16	
22		Line Charging		I_{4b}	A	5	1.5	
23								
24								
25	Temperature Rise					Compliant with Table 3	ASTA 2620	
26	Radio Interference Voltage			RIV	$\mu\text{V/dB}$	32 / 30		
27	Resitance Measurement					<20% +	IEC 62271	
28	Insulator Type					Silicone with Alt. Sheds		
29	Minimum Creepage					25mm/kV minimum		
30	Insulator Colour					Grey		
31	No. of Insulators per phase					3		
32	Current Carrying Component Material					Electrolytic Tinned HDHC Copper	BSEN 13601	
33	Cable Connection Type					14mm Hole + Slot		
34	Mild Steel Metalwork					Hot Dip Galvanised	ISO 1461	
35	Type of disconnector					Rocking	ASTA 2600B	
36	Mechanical Endurance					2,000 operations M1	IEC 62271	

DATA SHEET AX 36 kV

					Unit		Test House Standard	
1	Rated Voltage			U_r	kV	36		
2	Power Frequency Withstand Voltage rms							
3	Common		Dry	$U_d(2)$	kV	95	ASTA 2601	
4			Wet	$U_d(2a)$	kV	80		
5	Isolating Distance		Dry	$U_d(3)$	kV	105		
6			Wet	$U_d(3a)$	kV	88		
7	Lightning Impulse Withstand Voltage peak							
8		Common		$U_p(4)$	kV	200		IEC 62271
9		Isolating Distance		$U_p(5)$	kV	220		
10	Frequency			f_r	Hz	50		
11	Normal Current			I_r	A	630		
12	STC Withstand rms			I_k	kA	25	KEMA 2388-17	
13	STC Withstand Peak			I_p	kA	62.5		
14	Duration of STC			t_k	sec	3		
15	Making Current rms/peak				kA	3/7.5		
16	Making Current rms/peak optional				kA	10/25		
17	Breaking Current							IEC 62271
						Load-break Not Fitted	Load-break Fitted	KEMA 2219-16
18		Mainly Active Load		I_1	A	10	630	IPH 6065-17-067
19		Closed Loop		I_2	A	300	630	
20		Transformer No Load		I_3 Test not required as IEC60265 - 6.101.8.3				
21		Cable Charging		I_{4a}	A	5	16	IEC 62271
22		Line Charging		I_{4b}	A	5	1.5	
23								
24								
25	Temperature Rise					Compliant with Table 3		ASTA 2601
26	Radio Interference Voltage			RIV	$\mu\text{V/dB}$	32 / 30		
27	Resistance Measurement					<20% +		IEC 62271
28	Insulator Type					Silicone with Alt. Sheds		
29	Minimum Creepage					25mm/kV minimum		
30	Insulator Colour					Grey		
31	No. of Insulators per phase					3		
32	Current Carrying Component Material					Electrolytic Tinned HDHC Copper		BSEN 13601
33	Cable Connection Type					14mm Hole + Slot		
34	Mild Steel Metalwork					Hot Dip Galvanised		ISO 1461
35	Type of disconnector					Rocking		ASTA 2600B
36	Mechanical Endurance					2,000 operations M1		IEC 62271

ACTOM High Voltage Equipment

2 Magnet Road, Knights, 1413.

Tel : +27 (0) 11 820 5349

Fax : +27 (0) 11 820 5100

Directions:

GPS Co—ordinates S:S: 26° 11.875'

E:E: 28° 11.925'

Product Support

Craig Aaron

Mobile: +27 (0) 82 908 5976

Tel : +27 (0) 11 820 5167

Email: craig.aaron@actom.co.za



Sales and Marketing Manager

Daniel De Bruyn

Mobile: +27 (0) 72 252 4662

Tel: +27 (0) 11 820 5363

Email: Daniel.De-Bruyn@actom.co.za

