



TECHNO ELECTRICALS CO.

333, Gala Complex, Dindayal Upadhy Marg, Dumping Road, Mulund (W), Mumbai - 400 080.
 Tel.: +91-022-2537 3227, 2590 3232, Telefax : 2590 3434 • Email : chiragtec@gmail.com, macwellelectric@gmail.com

GUARANTEED TECHNICAL PARTICULARS - 11KV BREAKER - VMAX/VD4 - ABB MAKE

RATING AS PER STANDARD :IEC-56		www.chiragtec.com
	Model	VMAX/VD4
1	Rated Voltage & Frequency	11 kV / 33 kv, 50 Hz
2	Current Ratings	
a	Continuous rating open erection	630/800/1250 /1600 / 2000 / 2500 Amps.
b	Continuous rating in self ventilated cubicle .	AS PER A RATING
c	Short time current 3 sec.	20kA-3sec/26.3kA-3sec / 31.5kA-3sec/40kA-3sec
3	Ref. Ambient temperature	50*c as per IS 3427
4	Maximum rise of temperature over reference ambient for current rating	
a	Contacts in gas	In line with IEC 62271-1 / IEC 62271-100
b	Contacts in air	In line with IEC 62271-1 / IEC 62271-100
5	Derating factor for 50 0 C ambient temperature	NIL
6	Rated Operating duty	-- O – 3min. -CO-3 min. Co---
7	Breaking capacity based on duty cycle	(as per clause 6)
a	Symmetrical at rated voltage	31.5kA
b	Percentage DC component	30%
8	Transient recovery voltage	
a	Rate of rise at 36kV	As per IEC 62271-100
b	Peak voltage at 36kV	As per IEC 62271-100
9	Numbers of breaks per pole	One
10	Total length of contact travel	12-16 mm
11	Total length of break per pole	Approx. 8 – 11.5 mm
12	Rate of contact travel	
a	At tripping	3.6 - 4.3 m/s
b	At closing	2 – 2.5 m/s
13	Type of special device, if any, used to limit the rate of restriking voltage	None
14	Type of contacts	
a	Main	Plug
b	Arcing	Plug
c	Arc control device	None



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15	Material of contacts	
a	Main	Copper Chromium
b	Arcing Copper Tungsten Copper Tungsten	Copper Chromium
c	Whether contacts silver plated	Yes
d	Thickness of silver plating	10 Microns
16	Contact pressure at no load	2500N
17	Insulation level of C. B.	
a	One minute power frequency withstand voltage	28 kV rms
b	Impulse voltage withstand with 1.2/50 micro second wave shape	75 kV peak
18	Minimum clearance in air	
a	Between phase	80mm
b	Between live parts & earth	105 mm
c	Center distance between phases	150mm/210 mm/275mm
d	Center distance Between upper & lower contacts	205mm/310mm
19	Thickness of break chamber	12 mm min.
20	Maximum v pressure developed in breaker chamber at rated breaking capacity pressure	Approx. 1 bar more than filling
21	Whether C.B. is designed to close and latch on making or fitted with making current release	To close & latch
22	Whether C.B. is trip free or fixed trip	Trip free
a	If trip free, is it completely trip free under every method of closing (except manual closing)	Yes
23	Type of operating mechanism	
a	Motor OR solenoid operated --	springs wound by motor --
b	No of C.B. operations stored	O-C-O
24	Spring charging motor details	
a	Rating	200W
b	Rated voltage	230 V AC
c	Voltage variation	85 to 110%
d	Time required to charge the springs completely at rated voltage	<15 Sec
25	Method of closing	
a	Normal	Electromagnet
b	Emergency on C.B. front sheet	Manual
26	Type of closing mechanism --	Stored energy spring mechanism --
27	Closing coil details	
a	Rated voltage --	As per client's requirement --
b	Voltage variation	85 to 110 %
c	Power required at rated voltage	100 W

28	Type of tripping	
a	Normal	Electromagnet
b	Emergency	Manual
29	Type of tripping mechanism --	Stored energy spring mechanism --
30	Tripping coil details	
a	Rated voltage	As per client's requirement --
b	Voltage variation	70 to 110 %
c	Power required at rated voltage	100 W
31	Arc duration	
a	Arcing time at 100% breaking capacity, max.	10 - 15 ms
b	Opening time	35 to 60 ms
c	Total break time at 100% breaking capacity, max.	45-75 msec
32	Closing time, maximum	45 to 80 ms
33	No. of openings C.B. is capable of performing without inspection replacement of contacts or other main parts	
a	At no load or very low current	10000
b	At 100% rated current app.	10000
c	At 100% rated breaking current	50
36	Auxiliary contacts	
a	N/O and N/C contacts provided	6 N/O+6N/C
b	Whether convertible at site	NO
c	Breaking current d.c. and inductive circuit at 110 & 220 V DC respectively at L/R = 25 ms	5 & 2 Amps.
d	Breaking current a.c. and P.F. = 0.8 at 230 V AC	10 A
37	Interlocks provided (As per IEC requirements)	YES
38	CB operable in	
a	Test / Service position	YES
b	In between Test and Service position	NO
39	Weight of Circuit Breaker (Approx.)	85kgs/180kgs/300kgs
40	Provision for slow closing for maintenance purpose	NO
41	Rated Capacitive Breaking Current	
a	Normal Current	0.8 x Rated Current
b	Breaking Current	1250 Amps.
c	Making Current	79kAP



ABB Limited

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