

3VT1 Molded Case Circuit Breakers up to 160 A

Circuit breakers · Switch disconnectors

Technical specifications

Specifications		3VT1 7...-2..36-0AA0 Circuit Breakers	3VT1 716-2DE36-0AA0 Switch disconnectors	3VT1 7...-2..46-0AA0 Circuit Breakers ³⁾	3VT1 716-2EE46-0AA0 Switch Disconnectors
Order No.		3		4	
Number of poles		3		4	
Standards		EN 60 947-2, IEC 947-2	EN 60 947-3, IEC 947-3	EN 60 947-2, IEC 947-2	EN 60 947-3, IEC 947-3
Approval marks		CE			
Rated current I_n	A	16 ... 160 ²⁾	--	16 ... 160 ²⁾	--
Rated uninterrupted current I_u	A	16 ... 160 ²⁾	160	16 ... 160 ²⁾	160
Rated operational current I_e	A	--	160	--	160
Rated operational voltage U_e	V	max. AC 690		max. AC 690 max. AC 440	
Rated frequency f_n	Hz	50/60			
Rated impulse withstand voltage U_{imp}	kV	8			
Rated insulation voltage U_i	V	690			
Utilization category		A	--	A	--
• selectivity AC 690 V		AC-3 (16 ... 100 A)	AC-23 A	AC-3 (16 ... 100 A)	DC-22 A
• switching mode		AC-2 (100 ... 160 A)		AC-2 (100 ... 160 A)	AC-23 A
Rated short-time withstand current I_{cw} / t		--	2 kA/ 1 s	--	2 kA/1 s
Rated ultimate short-circuit breaking capacity (rms value) ¹⁾ I_{cu} / U_e		6 kA/AC 690 V 12 kA/AC 500 V 25 kA/AC 415 V 40 kA/AC 230 V	--	13kA/DC 440V (τ = max. 5 ms) 6 kA/AC 690 V 12 kA/AC 500 V 25 kA/AC 415 V 40 kA/AC 230 V	
Off-time at I_{cu}	ms	7	--	7	--
Rated service short-circuit breaking capacity (rms value) I_{cs} / U_e		3 kA/AC 690 V 6 kA/AC 500 V 13 kA/AC 415 V 20 kA/AC 230 V	--	13kA/DC 440V (τ = max. 5 ms) 3 kA/AC 690 V 6 kA/AC 500 V 13 kA/AC 415 V 20 kA/AC 230 V	
Rated short-circuit making capacity (peak value) I_{cm} / U_e		52 kA/AC 415 V	2.8 kA/AC 415 V	52 kA/AC 415 V	2.8 kA/AC 415 V
Losses per pole at $I_n = 160$ A	W	see table, page 2/14		15	
Mechanical endurance	cycles	20 000			
Electrical endurance ($U_e = AC 415$ V)	cycles	6 000			
Frequency of switching	cycles/ hr	120			
Operating force	N	55		65	
Front-side device protection		IP40			
Terminal protection		IP20			
Operating conditions					
Reference ambient temperature	°C	40			
Ambient temperature range	°C	-40 ... +55			
Working environment		dry and tropical climate			
Degree of pollution		3			
Max. elevation	m	2000			
Seismic resistance	Hz	3g (8 ... 50)			
Design modifications					
Front/rear connection		✓/✓			
Plug-in version		--			
Withdrawable version		--			
Accessories					
Switches - auxiliary/relative/signal/leading		✓/-/✓/-			
Shunt trip/with signal switch		✓/✓			
Undervoltage release/with leading switch/with signal switch		✓/-/✓			
Front hand drive/lateral drive right/left		✓/✓/✓			
Mechanical interlocking to the manual drive by Bowden wire		-/-		-/✓	
Motor. oper. mechanism/with oper. counter		+/+		+	
Locking-type lever		✓			

✓ available,
-- unavailable,
+ in preparation

- 1) When reversing the circuit breaker connection (power supply connected to terminals 2, 4, 6, (N) output to terminals 1, 3, 5, (N)), I_{cu} does not change.
- 2) Ranges of rated currents vary according to characteristics, see page 2/16.
- 3) Permissible load of N pole is 100%.