

## Test Document

Report No.: TD2/3147E-A

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Contents: 14 sheets

**Equipment under test:** Three-pole vacuum circuit-breaker 3AH3818-7 Z (17.5 kV, 63 kA, 3150 A) with vacuum interrupters VS 17085

**Manufacturer:** Siemens AG, PTD M C PB1, 13623 Berlin

**Client:** Siemens AG, PTD M C R&D VCB 12, 13623 Berlin

**Testing station:** Siemens AG, PTD M C TD, 13623 Berlin

**Date of test:** May 27 and 28-2003

**Applied test specifications:**

IEC Publication 60694, edition 2.2, 2002-01

DIN EN 60694 (VDE 0670, Teil 1000), 2002-09

IEEE C37.013-1997

**Tests performed:** Dielectric tests, including:  
Short-duration power-frequency withstand voltage: 50 kV  
Lightning impulse withstand voltage: 110 kV

**Test results:** The apparatus tested has passed the above indicated tests for 15.5kV (ANSI) and 17.5kV (IEC) without any objection. The results obtained and the proved performance comply with the requirements mentioned above.

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Berlin, May 10-2004

The test results exclusively  
relate to the items tested.

## Technical Data of Test Object

### Switching Device

Ratings assigned by the manufacturer

**Test object:** Three-pole vacuum circuit-breaker with vacuum interrupters VS 17085  
**Type:** 3AH3818-7-Z  
**Manufacturer:** Siemens AG, PTD M C PB1  
**Serial No.:** 3AH3/00004133 **Year of manufacture: 2003**  
**Drawing No.:** Drawings and part lists - see sheet 6

Rated voltage	17.5	kV
Rated lightning impulse withstand voltage	110	kV
Rated switching impulse withstand voltage	-	kV
Rated short-duration power-frequency withstand voltage	50	kV
Rated frequency	50/60	Hz
Rated normal current	3150	A
Rated peak withstand current	173	kA
Rated short-time withstand current	63	kA
Rated duration of short-circuit	3	s
Rated short-circuit breaking current		
Rated short-circuit current	63	kA
D.C. component	65	%
Rated short-circuit making current	173	kA
Rated transient recovery voltage		
Peak value	32.2	kV
Rate of rise	4.5	kV/μs
First-pole-to-clear-factor	1.5	
Rated operating sequence	CO-30 min-CO	
Arc extinguishing medium	vacuum	
Rated pressure (20 °C) (absolute)	< 0.01	Pa
Insulating medium	air	
Rated pressure / Minimum pressure (20 °C)	-	MPa
Driving mechanism		
Type of drive	spring/motor	
Rated voltage	110	V DC
Number of poles	3	
Number of units per pole	1	
Rated opening time	< 65	ms
Rated closing time	< 80	ms
Rated voltage of opening release	110	V DC
Rated voltage of closing release	110	V DC
Rated supply voltage	-	V DC
Rated frequency of supply voltage	-	Hz
Further specifications:		
Tube in pole R	S.-No.:	13
Tube in pole S	S.-No.:	15
Tube in pole T	S.-No.:	19

**Essential characteristics:** -

**Remarks:** -