

# SIEMENS

Prüf-Nr./Q-Nr.: **2708 b**  
Certificate No.:

Dienststelle: **A&D CD CC TS2 / Drutschmann**  
Department:

Ort: **Amberg** Tag: **2006-07-06**  
Place: Date:

Anlagen: **Appendix**  
Enclosures:

## Prüfbescheinigung / Test - Certificate

Erzeugnis / Product: **Moulded Case Circuit Breaker VT160**

Typ: **3VT82, 3VT9**  
Type:

Tech. Daten:  **$U_e = 440 \text{ V AC}$ ,  $I_n = 32\text{-}160\text{A}$**   
Specification:  **$I_{cu} = 20 \text{ kA (VT160N)}$**   
 **$I_{cu} = 25 \text{ kA (VT160H)}$**

Hersteller: **Siemens Ltd.**  
Manufacturer:

Art der Prüfung / Type of test: **Type Test**

Prüfer / Tested by: **Mr. Soukup**  
**Mr. Li Huailin**

Labor / Laboratory: **ALPHA registered Testing**  
Ort / Test site: **Laboratory D 06 Siemens AG,**  
**Amberg**

**TILVA - Shanghai, China**

Angewandte Prüfbestimmungen / Test specifications applied:  
**IEC 60947-2: 2003**

Durchgeführte Prüfungen / Tests conducted:

**Test sequence I: General performance characteristics**  
**Test sequence II: Rated service short-circuit breaking capacity**  
**Test sequence III: Rated ultimate short-circuit breaking capacity**

Prüfergebnis / Test results:


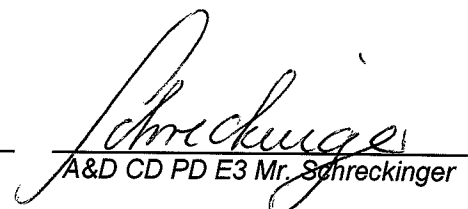
**The specification are met.**

Bemerkungen / Remarks: **Issued: 2005-08-04**

**Index a, dated 2006-03-20: Accessories are covered by Type Tests and added, Appendix added.**  
**Index b, dated 2006-07-06: 240 V Ratings added, Appendix revised.**

Anerkannt / Accepted by

Gegengezeichnet / Released by:

  
A&D CD CC L Mr. Dr. Voss  
A&D CD PD E3 Mr. Schreckinger

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Formular: Nov 2005

## Validity

This test certificated is valid for circuit breakers 3VT82 (VT160) and covers also suitable accessories 3VT9.

## Characteristics Main Circuit:

- Utilization category: A
- Interrupting medium: Air
- Design: Moulded Case
- Operation mechanism: Manual / Motor operated
- Suitability for isolation: Suitable
- Degree of protection: IP40
- Switching overvoltage: 8 kV
- EMC: not applicable
- Circuit breaker for use on phase-earthed systems: Yes
- Circuit breaker for use in IT systems: Yes
- Rated operational voltage  $U_e$ : 440 V
- Rated insulation voltage  $U_i$ : 500 V
- Rated impulse withstand voltage: 8 kV
- Rated operational current  $I_n$ : 32, 40, 50, 63, 80, 100, 125 or 160 A
- Number of poles: 3 or 4
- Rated frequency: 50 / 60 Hz
- Uninterrupted duty  $I_u$ : 160 A

Short circuit characteristic:	VT160N	VT160H
Rated short-time making capacity $I_{cm}$ (240V)	80 kA	143 kA
Rated short-time making capacity $I_{cm}$ (400V)	73,5 kA	105 kA
Rated short-time making capacity $I_{cm}$ (440V)	40 kA	52,5 kA
Rated ultimate short-circuit breaking capacity $I_{cu}$ (240V)	40 kA	65 kA
Rated ultimate short-circuit breaking capacity $I_{cu}$ (400V)	35 kA	50 kA
Rated ultimate short-circuit breaking capacity $I_{cu}$ (440V)	20 kA	25 kA
Rated service short-circuit breaking capacity $I_{cs}$ (240V)	30 kA	48,75 kA
Rated service short-circuit breaking capacity $I_{cs}$ (400V)	26,25 kA	37,5 kA
Rated service short-circuit breaking capacity $I_{cs}$ (440V)	12,5 kA	18,75 kA
Rated short-time withstand current $I_{cw}$	-	-

## Characteristics Auxiliary Circuit:

- Rated operational voltage  $U_e$ : 230-250 V ac, 380-440 V ac, 110 V dc
- Rated insulation voltage  $U_i$ : 440 V
- Rated operational current  $I_e$ : 3 A ac, 0,14 A dc
- Kind of current: ac or dc
- Rated frequency: 50 / 60 Hz
- Number of circuits: 2
- Number and kind of contact elements: 1 off, 1 on
- Rated uninterrupted current  $I_u$ : 4 A
- Utilization category: AC-15, DC13
- Rated conditional short-circuit current  $I_{cn}$ : 1 kA

## Releases:

- Shunt releases: Yes
- Over current releases  
Instantaneous: Yes  
Inverse time delay: Yes
- Undervoltage releases: Yes
- Rated control circuit voltage  
Shunt releases: 250/440 V ac, 50/60 Hz, 110/220 V dc  
Undervoltage releases: 250/440 V ac, 50/60 Hz, 110 V dc
- Kind of current: ac or dc
- Rated frequency: 50 / 60 Hz
- Overcurrent releases: Yes  
Rated current: 32, 40, 50, 63, 80, 100, 125 or 160 A  
Current settings, thermal: 32, 40, 50, 63, 80, 100, 125 or 160 A  
Current settings, magnetic:  $8 - 12 \times I_n$   
Time settings, tripping time:  $> 2 \text{ h } (1,05 \times I_n)$   
Time settings, tripping time:  $< 2 \text{ h } (1,3 \times I_n)$   
Time settings, Instantaneous tripping:  $8 - 12 \times I_n$