

Prüf.-Nr./Q-Nr.: **2254**
Certificate No.:

Dienststelle: **A&D CD SV TQ2 / Drutschmann**
Department:

Ort: **Amberg** Tag: **03.03.1998**
Place: Date:

Anlagen: **Test Report SR-M**
Enclosures: **Test Report SR-E**
Correlation Sheet

Prüfbescheinigung / Test-Report

Erzeugnis / Product: **In-Line Switch Disconnecter with Fuses, Plug-In Version**

Typ: 3NJ6	Auftr.-Nr./Bz-Nr.: --	Hersteller: ABB - Ase Brown Boveri
Type:	Internal Order-No.:	Manufacturer:
Fabr.-Nr.: --	Kunden-Nr.: --	Kunde / Kennwort: --
Factory-Serial-No.:	Customer's Ref.-No.:	Order code word:
Werk-Nr.: --	Techn. Daten: U_e = 690 V, I_m = 100 up to 630 A	
Works No.:	Specification:	

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

Prüfer / Tested by: Tag der Prüfung / Date of test: **March 1992**

Prüfört / Test site: **Skien, Norway** Verwendete Prüfeinrichtung / Test equipment: **NEFI High Power Laboratory**

Angewandte Prüfbestimmungen / Test specifications applied:
IEC 947-1, IEC 947-3

Durchgeführte Prüfungen / Tests conducted:
See attached test report

Prüfergebnis / Test results:
All requirements of the test specification were met

Bemerkungen / Remarks:

Anerkannt / Accepted by

Gegengezeichnet / Released by:

Klaimmer

H. Walker
A&D CD SV TQ Hr. Walker

H. Stang
A&D CD SE TV Hr. Stang

SIEMENS AKTIENGESELLSCHAFT

Automatisierungs- und Antriebstechnik

H. H. Steffen (Vorsitzender), H. M. Strehle, G. Fritsch, K. Wucherer

Correlation Sheet

ABB Type DesignationSiemens Type Designation

SR-E 00

3NJ6110-3E

SR-E 1

3NJ6120-3E

SR-E 2

3NJ6140-3E

SR-E 3

3NJ6160-3E

SR-M 00

3NJ6110-3M

SR-M 1

3NJ6120-3M

SR-M 2

3NJ6140-3M

SR-M 3

3NJ6160-3M

Type test verification

Test specifications IEC 947-1, IEC 947-3

Switch-fuse

Type SR-E 00, SR-E 1, SR-E 2 and SR-E 3
Independent manual operated

Rated voltage 690 V

Rated current

SR-E 00	100/160 A
SR-E 1	250 A
SR-E 2	400 A
SR-E 3	630 A

Extracts from tests performed at
NEFI High Power Laboratory

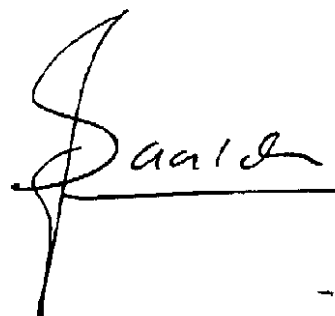
ABB Distribusjon AS
SKIEN – NORWAY

March 1992

Test laboratory



Development department



Type test verifications: Switch-fuse type SR-E

Characteristics

Rated frequency: 50 Hz

Rated voltage:
Rated operational voltage, IEC 947-3 § 4.3.1.1: 690 V

Rated insulation voltage, IEC 947-3 § 8.3.3.2.3: 3500 V, 50 Hz 1 minute

Rated current:
Conventional free air thermal current I_{th} IEC 947-3 § 4.3.2.1.

Type	I _{th} , A	Max. power loss in fuses, W.
SR-E 00	100/160	7/12
SR-E 1	250	23
SR-E 2	400	34
SR-E 3	630	48

Temperature rise limits:
Metallic parts in contact with insulating material: 110° C.
Terminals for external insulated material: 70° C.

Type test verifications: Switch-fuse type SR-E.

Utilization category AC 22B, 500 V,
AC 21B, 690 V, IEC 947-3 § 4.4.

Tests sequences
IEC 947-3 § 8.3.1

Test results

Test sequence 1.	SR-E 00	SR-E 1	SR-E 2	SR-E 3	Spec. IEC 947-3 §
General performance					
Temperature rise test:	Complies	Complies	Complies	Complies	8.3.3.1
Dielectric properties:	Complies	Complies	Complies	Complies	8.3.3.2
Making and breaking capacities: AC 22B: 550 V, cos. $\Phi = 0,85$ <i>0,65</i> 10 operations	500 A	750 A	1600 A	1900 A	8.3.3.3
AC 21B: 725 V, cos. $\Phi = 0,95$ 10 operations	150 A	380 A	600 A	950 A	8.3.3.3
Dielectric verification	Complies	Complies	Complies	Complies	8.3.3.4
Leakage current	Complies	Complies	Complies	Complies	8.3.3.5
Temperature rise verification	Complies	Complies	Complies	Complies	8.3.3.6
Streight of actuator mechanism	Complies	Complies	Complies	Complies	8.3.3.7
Test sequence 2.					
Operational performance:					
No load operations c/o	1700	1400	800	500	8.3.4.1
Load operations c/o	300	200	200	100	
550 V, cos. $\Phi = 0,8$	160 A	250 A	400 A	630 A	8.3.4.1
Load operations c/o	300	200	200	100	
725 V, cos. $\Phi = 0,95$	100 A	250 A	400 A	630 A	8.3.4.1
Dielectric verification	Complies	Complies	Complies	Complies	8.3.4.2
Leakage current	Complies	Complies	Complies	Complies	8.3.4.3
Temperature rise verification	Complies	Complies	Complies	Complies	8.3.4.4

Test results					
Test sequence 4.	SR-E 00	SR-E 1	SR-E 2	SR-E 3	Spec. IEC 947-3 §
<u>Conditional short-circuit current</u>					
Fuse protected short-circuit withstand 725 V, cos. $\Phi = 0,18$	50 kA	50 kA	50 kA	50 kA	8.3.6.2
Fuse protected short-circuit making 725 V, cos. $\Phi = 0,18$	50 kA	50 kA	50 kA	50 kA	8.3.6.2
Dielectric verification	Complies	Complies	Complies	Complies	8.3.6.3
Leakage current	Complies	Complies	Complies	Complies	8.3.6.4
Temperature rise test	Complies	Complies	Complies	Complies	8.3.6.5



Information given in this publication is generally applicable to equipment described. Changes may be made in future without notice.

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N-H 4403 E
9203 - 1000 - 0

Type test verification

Test specifications IEC 947-1, IEC 947-3

Switch-fuse
Type SR-M 00, SR-M 1, SR-M 2 and SR-M 3
Independent manual operated

Rated voltage 690 V

Rated current

SR-M 00	100 A
SR-M 1	250 A
SR-M 2	400 A
SR-M 3	630 A

Extracts from tests performed at
NEFI High Power Laboratory

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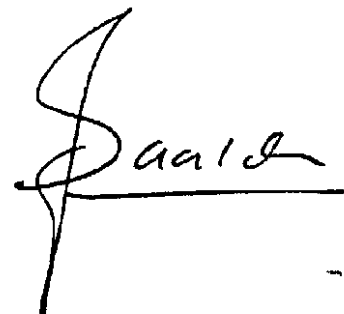
SKIEN – NORWAY

March 1992

Test laboratory



Development department



Type test verifications: Switch-fuse type SR-M

Characteristics

Rated frequency: 50 Hz

Rated voltage:
Rated operational voltage, IEC 947-3 § 4.3.1.1: 690 V

Rated insulation voltage, IEC 947-3 § 8.3.3.2.3: 3500 V, 50 Hz 1 minute

Rated current:
Conventional free air thermal current I_{th} IEC 947-3 § 4.3.2.1.

Type	I _{th} , A	Max. power loss in fuses, W.
SR-M 00	100	7
SR-M 1	250	23
SR-M 2	400	34
SR-M 3	630	48

Temperature rise limits:
Metallic parts in contact with insulating material: 110° C.
Terminals for external insulated material: 70° C.

Type test verifications: Switch-fuse type SR-M.

Utilization category AC 23B, IEC 947-3 § 4.4.

Tests sequencies
IEC 947-3 § 8.3.1

Test results

Test sequence 1.	SR-M 00	SR-M 1	SR-M 2	SR-M 3	Spec. IEC 947-3 §
<u>General performance</u>					
Temperature rise test:	Complies	Complies	Complies	Complies	8.3.3.1
Dielectric properties:	Complies	Complies	Complies	Complies	8.3.3.2
Making and breaking capacities: 725 V, cos. $\Phi = 0,35$ 10 operations	800 A	2000 A	3200 A	5040 A	8.3.3.3
Dielectric verification	Complies	Complies	Complies	Complies	8.3.3.4
Leakage current	Complies	Complies	Complies	Complies	8.3.3.5
Temperature rise verification	Complies	Complies	Complies	Complies	8.3.3.6
Strenght of actuator mechanism	Complies	Complies	Complies	Complies	8.3.3.7
<u>Test sequence 2.</u>					
<u>Operational performance:</u>					
No load operations c/o	1700	1400	800	500	8.3.4.1
Load operations c/o	300	200	200	100	8.3.4.1
725 V, cos. $\Phi = 0,65$	100 A	250 A	400 A	630 A	
Dielectric verification	Complies	Complies	Complies	Complies	8.3.4.2
Leakage current	Complies	Complies	Complies	Complies	8.3.4.3
Temperature rise verification	Complies	Complies	Complies	Complies	8.3.4.4

Test results					
Test sequence 4.	SR-M 00	SR-M 1	SR-M 2	SR-M 3	Spec. IEC 947-3 §
<u>Conditional short-circuit current</u>					
Fuse protected short-circuit withstand 725 V, cos. $\Phi = 0,18$	50 kA	50 kA	50 kA	50 kA	8.3.6.2
Fuse protected short-circuit making 725 V, cos. $\Phi = 0,18$	50 kA	50 kA	50 kA	50 kA	8.3.6.2
Dielectric verification	Complies	Complies	Complies	Complies	8.3.6.3
Leakage current	Complies	Complies	Complies	Complies	8.3.6.4
Temperature rise test	Complies	Complies	Complies	Complies	8.3.6.5

ABB
ASEA BROWN BOVERI

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