

TEST REPORT No. A20000177

Apparatus : *High-voltage circuit-breaker*

Designation : *MERLIN GERIN SF1*

Rated voltage 40.5 kV - Rated normal current 1250 A - Rated frequency 50/60 Hz

Manufacturer : *SCHNEIDER ELECTRIC INDUSTRIES SA – Rueil Malmaison - FRANCE*

Object : *Circuit-breaker Class C2*

Single-phase capacitor bank (back to back) current switching tests rated at :

Test -duty BC2 : 120 CO at 400A – 32.8 kV – 20 kA peak / 4760 Hz

Test duty BC1 : 48 O at 120A – 32.8 kV

Single-phase capacitor bank (single) current switching tests rated at

Test duty BC2 : 151 CO at 875A – 34.0 kV

Tested for : *SCHNEIDER ELECTRIC*

Date(s) of tests : *27/09/2000 to 30/11/2000*

These tests were carried out in accordance with : **Standard IEC 62 271 - 100 - § 6.111.9.1.5**

The performance of the apparatus tested and the results obtained are shown in the tables, oscillograms and photographs enclosed.

The responsibility for conformity of any apparatus having the same designation with that tested rests with the Manufacturer.

The documents forming part of this report are :

Ratings of the apparatus	1 page(s)
Record of proving tests	1 page(s)
Conditions of proving tests	6 page(s)
Test result tables	57 page(s)
Photographs	0 page(s)
Oscillograms	330 page(s)
Drawings of the apparatus	2 page(s)

The test report comprises 398 pages

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Grenoble 22/10/2001

Technical Manager

Test Manager

RATINGS OF THE CIRCUIT-BREAKER ACCORDING TO IEC 62 271 - 100

Manufacturer	: SCHNEIDER ELECTRIC
Designation	: MERLIN GERIN EVOLIS SF1
Presentation	fixed : ■■ withdrawable :
Operating sequence	O - 3 min - CO - 3 min - CO : O - 0.3 s - CO - 3 min - CO : CO - 15 s - CO : O - 0.3 s - CO - 15 s - CO : ■■ other :
Method of closing	manual : ■■ electrical : ■■
Method of opening	manual : ■■ electrical : ■■
Interrupting medium	gas SF6 : ■■ vacuum : other :
Absolute pressure at 20 °C	bar : 3
Number of poles	: 3
Number of units per pole	: 1
Voltage	kV : 40.5
Power frequency withstand voltage (1 min)	kV : 85
Lightning impulse withstand voltage	kV peak : 185
Switching impulse withstand voltage	kV peak : /
Peak value of TRV	kV : 69.4
Rate-of-rise of TRV	kV/μs : 0.57
First-pole-to-clear factor	: 1.5
Frequency	Hz : 50/60
Normal current	A : 1250
Peak withstand current	kA : 63
Short-time withstand current - duration	kA : 25 s : 3
Short-circuit breaking current	kA : 25
Percentage D.C. component	% : 30
Short-circuit making current	kA peak : 63
Supply voltage	- control motor Vdc : 125 - closing mechanism Vdc : 125 - opening mechanism Vdc : 12 Vdc Mitop
Control mechanism type	: Mécanique à ressort type RI

RECORD OF PROVING TESTS

Apparatus No. :

Test type and test-duty	Page
Preconditioning Test - Test duty (T60) : 3 O at 15.0 kA – 12.0/12.6 kV	10
Single-phase capacitor bank (back to back) current switching tests rated at : Test duty BC2 : 120 CO at 400/416 A -33.1 / 35.7 kV Test duty BC1 : 48 CO at 123 / 138 A – 33.9/ 35.1 kV	11 to 30 31 to 38
Single-phase capacitor bank (single) current switching tests rated at : Test duty BC2 : 151 CO at 884 / 925 A – 33.9 / 35.3 kV .	39 to 64
No-load operations before and after tests	65
Verification of dielectric withstand after tests	66

Manufacturer
Representative(s)

: Mr MILLON

SCHNEIDER ELECTRIC