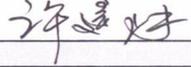




<b>TEST REPORT</b> <b>EN 60947-2</b> <b>Low-voltage switchgear and controlgear - Part 2: Circuit-breakers</b>	
Report Number. .... :	03601-A-21D0101-S
Date of issue ..... :	2022-01-07
Total number of pages ..... :	159 pages
Name of Testing Laboratory preparing the Report ..... :	Suzhou Electrical Apparatus Science Research Institute Co., Ltd. (EETI)
Applicant's name ..... :	Zhejiang Tengen Smart Electrics Co., Ltd.
Address ..... :	No. 2777 West Zhongshan Road, Xiuzhou District, Jiaxing, Zhejiang Province, P.R.China.
<b>Test specification:</b>	
Standard ..... :	EN 60947-2:2017/A1:2020
Test procedure..... :	CCA Scheme
Non-standard test method..... :	N/A
Test Report Form No..... :	EN60947_2J
Test Report Form(s) Originator.... :	DEKRA Certification B.V.
Master TRF ..... :	Dated 2020-03-31
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<b>Test item description</b> .....	Moulded Case Circuit-Breaker	
<b>Trade Mark(s)</b> .....	Tengen	
<b>Manufacturer</b> .....	Zhejiang Tengen Smart Electrics Co., Ltd. No. 2777 West Zhongshan Road, Xiuzhou District, Jiaxing, Zhejiang Province, P.R.China.	
<b>Model/Type reference</b> .....	TGM1NE-630M,TGM1NE-630H,TGMKE-630M,TGMKE-630H, TGMGE-630M,TGMGE-630H,TGMHE-630M,TGMHE-630H	
<b>Ratings</b> .....	See page 10	
<b>Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):</b>		
<input checked="" type="checkbox"/>	<b>Testing Laboratory:</b>	Suzhou Electrical Apparatus Science Research Institute Co., Ltd.(EETI)
<b>Testing location/ address</b> .....		No.7 Yonghe Street, Binhe Road, New District, Suzhou, China
<b>Tested by (name, function, signature)</b> .....		Fang Gang(Team leader) 
<b>Approved by (name, function, signature) ..</b>		Xu Jianlin(Supervisor) 
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 1:</b>	
<b>Testing location/ address</b> .....		
<b>Tested by (name, function, signature):</b>		
<b>Approved by (name, function, signature) ..</b>		
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 2:</b>	
<b>Testing location/ address</b> .....		
<b>Tested by (name + signature).....</b>		
<b>Witnessed by (name, function, signature) . :</b>		
<b>Approved by (name, function, signature) .. :</b>		
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 3:</b>	
<input type="checkbox"/>	<b>Testing procedure: CTF Stage 4:</b>	
<b>Testing location/ address</b> .....		
<b>Tested by (name, function, signature):</b>		
<b>Witnessed by (name, function, signature) . :</b>		
<b>Approved by (name, function, signature) .. :</b>		
<b>Supervised by (name, function, signature) :</b>		

<b>List of Attachments (including a total number of pages in each attachment):</b>	
Attachment 1: photos of the product (pages 5,159)	
<b>Summary of testing:</b>	
<b>In case of alternative test programs for circuit breakers with a different number of poles, the following program is used:</b>	
<input type="checkbox"/> Programme 1 (three pole fully tested) <input checked="" type="checkbox"/> Programme 2 (four pole fully tested) <input type="checkbox"/> Alternative program not applicable	
<b>Tests performed (name of test and test clause):</b>	Sample No.:##21#22
TEST SEQUENCE I Sample No.:#01#02 8.3.3 General performance characteristics	Mechanical properties of terminals 8.2.4 Clearances and creepage distances 7.1.4 Insulating material: Comparative tracking index 7.1.4 Resistance to abnormal heat and fire 8.2.1.1.1
TEST SEQUENCE II (Ics) Sample No.:#03-#10 8.3.4 Rated service short-circuit breaking capacity	Sample specifications: TGM1NE-630MP 630A 4P #01 TGM1NE-630M 630A 3P #02 TGMHE-630M/3300 630A 3P #03#04#05#20#21#22
TEST SEQUENCE III (Icu) Sample No.:#11-#15 8.3.5 Rated ultimate short-circuit breaking capacity	TGMHE-630M/3300 400A 3P #06#26 TGMKE-630M/3300 630A 3P #11#12#13#17#27
TEST SEQUENCE III (phase+N test) Sample No.:#16	TGMKE-630M/3300 400A 3P #14#18 TGMGE-630H/3300 630A 3P #07#08#09 TGMGE-630H/3300 400A 3P #10
TEST SEQUENCE IV Sample No.:#17#18 8.3.6 Rated short-time withstand current	TGMKE-630M/4300 630A 4P#15#16#19#23 TGM1NE-630 with communication module+overload non-tripping accessory #24#25
TEST SEQUENCE IV (phase+N test) Sample No.:#19	TGMHE-630M/3300 400A 3P #26 TGMKE-630M/3300 630A 3P #27
Annex C -Individual pole short-circuit test sequence Sample No.:#26#27	Remark:
Annex F - Additional tests for circuit-breakers with electronic over-current protection Sample No.:#20#23	This test report is based on test report 03601-A- 21B0977-S issued on 2021-11-19, all the test results are copied from the test report(except CTI test).
Annex N- Electromagnetic compatibility (EMC) Sample No.:#24#25	
<b>Testing location:</b>	
No.7 Yonghe Street, Binhe Road, New District, Suzhou,China	
<b>Summary of compliance with National Differences (List of countries addressed):</b>	
N/A	

**Statement concerning the uncertainty of the measurement systems used for the tests**

(may be required by the product standard or client)

**Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

**Procedure number, issue date and title:**

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

**Statement not required by the standard used for type testing**