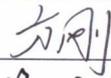




<p>TEST REPORT EN IEC 60947-4-1 Low voltage switchgear and controlgear Part 4: Contactors and motor-starters Section 1 - Electromechanical contactors and motor-starters</p>	
Report Number	03601-A-22D0156-S
Date of issue	2023-04-11
Total number of pages.....	145 pages
Name of Testing Laboratory preparing the Report.....	Suzhou Electrical Apparatus Science Research Institute Co., Ltd. (EETI)
Applicant's name.....	Zhejiang Tengen Electric Co., Ltd.
Address	Sulv Industrial Area, Liushi Town, Yueqing City, Zhejiang Province, P.R.China
Test specification:	
Standard	EN IEC60947-4-1:2019
Test procedure	CCA Scheme
Non-standard test method	N/A
Test Report Form No.	EN IEC 60947_4_1D
Test Report Form(s) Originator	DEKRA Certification B.V.
Master TRF	Dated 2019-05-14
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Test item description	AC Contactor	
Trade Mark	TENGEN	
Manufacturer	Zhejiang Tengen Electric Co., Ltd. Sulv Industrial Area, Liushi Town, Yueqing City, Zhejiang Province, P.R.China	
Model/Type reference	See page 6	
Ratings	See page 6~7	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" type="checkbox"/> Testing Laboratory:	Suzhou Electrical Apparatus Science Research Institute Co., Ltd. (EETI)	
Testing location/ address	No.7 Yonghe Street, Binhe Road, New District, Suzhou, China	
Tested by (name, function, signature)	Fang Gang (Team leader)	
Approved by (name, function, signature) ..	Xu Jianlin (Supervisor)	
<input type="checkbox"/> Testing procedure: CTF Stage 1:		
Testing location/ address		
Tested by (name, function, signature)		
Approved by (name, function, signature) ..		
<input type="checkbox"/> Testing procedure: CTF Stage 2:		
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
<input type="checkbox"/> Testing procedure: CTF Stage 3:		
<input type="checkbox"/> Testing procedure: CTF Stage 4:		
Testing location/ address		
Tested by (name, function, signature)		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
Supervised by (name, function, signature) :		



List of Attachments (including a total number of pages in each attachment):	
Attachment : The test data of auxiliary contacts according to EN 60947-5-1:2017 (total 6 pages from page 140 to page 145)	
Summary of testing:	
Tests performed (name of test and test clause):	Sample specifications:
<p>Test sequence I:</p> <ul style="list-style-type: none"> - Temperature rise (Clause 9.3.3.3) #01#02 - Operating limits (Clause 9.3.3.2) #02~#17 - Test of dielectric properties (Clause 9.3.3.4) #02 - Coil power consumption(Clause 9.3.3.2.1.2) #01#02#03#22#23 - Pole impedance(Clause 9.3.3.2.1.3) #01 <p>Test sequence II: #18~#29</p> <ul style="list-style-type: none"> - Making and breaking capacity (Clause 9.3.3.5) - Operational performance capability (Clause 9.3.3.6) <p>Test sequence III:</p> <ul style="list-style-type: none"> - Test at the prospective current "r" (Clause 9.3.4.2.2) #30#31 - Test at the rated conditional short-circuit current "Iq" (Clause 9.3.4.2.3) #32#33 <p>Test sequence IV</p> <ul style="list-style-type: none"> - Overload current withstand capability of contactors (Clause 9.3.5) #34#35 <p>Test sequence V: #36#37</p> <ul style="list-style-type: none"> -Verification of mechanical properties of terminals (8.2.4) -Verification of degree of protection (Annex C) <p>EN60947-1: #02#17</p> <p>Clearances and creepage distances (Clause 8.1.4)</p> <p>Comparative tracking index (Clause 8.1.4)</p> <p>Resistance to abnormal heat and fire (Clause 8.2.1.1.1)</p> <p>EN60947-5-1: #38#39#40#41</p> <p>Making and breaking capacities of switching element under normal conditions (Clause 8.3.3.5.3)</p> <p>Making and breaking capacities of switching element under abnormal conditions (Clause 8.3.3.5.4)</p> <p>Performance under conditional short-circuit current (Clause 8.3.4)</p> <p>Remark: This test report is based on test report 03601-A-22B0876-S issued on 2022-11-28, all the test results are copied from the test report(except CTI test).</p>	<p>TGC1-1811x Us: 415V 50/60Hz: #01#22#23#31#33</p> <p>TGC1-0911x Us: 415V 50/60Hz: #02#18#19#30#32</p> <p>TGC1-0911x Us: AC24V 50Hz: #03</p> <p>TGC1-0911x Us: AC36V 50Hz: #04</p> <p>TGC1-0911x Us: AC48V 50Hz: #05</p> <p>TGC1-0911x Us: AC110V 50Hz: #06</p> <p>TGC1-0911x Us: AC220V 50Hz: #07</p> <p>TGC1-0911x Us: AC380V 50Hz: #08</p> <p>TGC1-0911x Us: AC400V 50Hz: #09</p> <p>TGC1-0911x Us: AC415V 50Hz: #10</p> <p>TGC1-0911x Us: AC24V 50/60Hz: #11</p> <p>TGC1-0911x Us: AC36V 50/60Hz: #12</p> <p>TGC1-0911x Us: AC48V 50/60Hz: #13</p> <p>TGC1-0911x Us: AC110V 50/60Hz: #14</p> <p>TGC1-0911x Us: AC220V 50/60Hz: #15</p> <p>TGC1-0911x Us: AC380V 50/60Hz: #16</p> <p>TGC1-0911x Us: AC400V 50/60Hz: #17</p> <p>TGC1-1211x Us: 415V 50/60Hz: #20#21</p> <p>TGC1-0911xN Us: 415V 50/60Hz: #24#25</p> <p>TGC1-1211xN Us: 415V 50/60Hz: #26#27</p> <p>TGC1-1811xN Us: 415V 50/60Hz: #28#29</p> <p>TGC1-0911 Us: AC24V(50Hz):#34</p> <p>TGCJH-1811 Us:AC220V(50Hz):#35</p> <p>TGC1-1811 Us:AC220V(50Hz):#36</p> <p>TGC1-1211 Us: AC415V(50Hz):#37</p> <p>TGC1-0911 Us: AC400V(50Hz):#38</p> <p>TGC1-1211 Us: AC400V(50/60Hz):#39</p> <p>TGC1-1211 Us: AC110V(50/60Hz):#40</p> <p>TGC1-1211 Us: AC48V(50/60Hz):#41</p> <p>TGC1-1211 Us: AC36V(50/60Hz):#42</p> <p>TGC1-1211 Us: AC24V(50/60Hz):#43</p>